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JUN 25 2001

Mr. Timothy Curry
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901 North 5th Street
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FED
Site: Beatrice FMGP
ID #: NEN000704084
Break: 4
Other:
6/25/01

RE: The Pre-CERCLIS Site Screening Assessment for the Beatrice Former Manufactured Gas Plant (FMGP) Site.

Dear Mr. Curry:

The Pre-CERCLIS Screening Assessment report for the Beatrice FMGP site is enclosed. This Screening Assessment was completed under the Multi-Site Cooperative Agreement between Region 7 U.S. EPA and NDEQ.

The FMGP site sampled is located directly south of the intersection of First and Market Streets in Beatrice, Nebraska. The inactive site is adjacent and east from the Big Blue River. Additional information collected from the Beatrice Public Library indicated that the location of the electric utility may have changed and there were road name changes and redevelopment in the vicinity of the site. The current site is located on First Street, south of Market Street, between the Big Blue River and the railroad tracks. The following are various locations found for the Beatrice Electric Company:

- In 1888 – Northwest corner of Front and Elk Streets,
- In 1890 – First Street, between Elk and Ella Streets,
- In 1898 – 301 N. First Street (same as Front and Elk Street location in 1888; First Street is the same as Front Street), and
- In 1902-1911 – No specific references to address and Streets.

In 1992, HDR Environmental Engineering conducted an investigation of the site/area of concern. Soil and ground water samples were analyzed for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), metals, and cyanide. It appears that chemical analyses conducted on both ground water and soil samples verified that the site has been impacted with contaminants consistent with FMGP process by-products/wastes.

The Pre-CERCLIS Site Screening Assessment conducted at the Beatrice FMGP was designed to gather information to assess potential threats to human health and the environment and to determine the potential need for additional response/assessment

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under CERCLA. VOC, PAH, and heavy metal contamination was detected in a soil sample collected from the site using direct push technology (i.e., Geoprobe®). The field activities included the collection and analyses of two of four ground water samples. The analytical results verified impact to the ground water pathway. The contaminants of concern with the greatest concentrations include naphthalene, acenaphthene, phenanthrene, and total extractable hydrocarbons. The reported concentrations of several compounds exceeded maximum contaminant levels (MCLs).

No other up-gradient sources of the target compounds were identified, indicating that the release to ground water mostly likely originated from on-site sources. In fact, the contaminated on-site soils may be acting as a secondary source under current site conditions.

It is apparent that a release of hazardous substances has occurred to on-site soils and to the ground water pathway in the vicinity of the site. Further site assessment under CERCLS is necessary to better determine the potential risks to human health and the environment and to determine if removal actions may be warranted at this site.

The Pre-CERCLIS Site Screening Assessment report was prepared by Jacobson Helgoth Consultants, Inc. and reviewed by Wade Gregson. If you have any questions, please call us at (402) 471-3388.

Sincerely,

Steve Kemp

Steve Kemp
Unit Supervisor
Remediation Section
Waste Management Division

Enclosure

PRE-CERCLIS SITE SCREENING ASSESSMENT

BEATRICE FORMER MANUFACTURED GAS PLANT

BEATRICE, NEBRASKA

for

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 7

and

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

prepared by

JACOBSON HELGOTH CONSULTANTS, INC.

May 2001

Revision 0

Jacobson Helgoth
CONSULTANTS

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LIST OF ABBREVIATIONS

CERCLA	Comprehensive Environmental Response Compensation and Liability Act
EPA	U.S. Environmental Protection Agency
EPS	Environmental Priority Service
FMGP	Former Manufactured Gas Plant
GC	Gas Chromatograph
JHC	Jacobson Helgoth Consultants, Inc.
MCL	Maximum Contaminant Level
mg/L	Milligrams per Liter
NDEQ	Nebraska Department of Environmental Quality
NFRAP	No Further Remedial Action Planned under CERCLA Authority
PAH	Poly Aromatic Hydrocarbons
PCSSA	Pre-CERCLIS Site Screening Assessment
ppb	Parts per Billion
ppm	Parts per Million
QA/QC	Quality Assurance/Quality Control
SARA	Superfund Amendments and Reauthorization Act of 1986
Semi-VOC	Semi-Volatile Organic Compound
VOC	Volatile Organic Compound

SECTION 1.0
INTRODUCTION

The Nebraska Department of Environmental Quality (NDEQ), under a Multi-Site Cooperative Agreement with the Region 7 Office of the U.S. Environmental Protection Agency (EPA), agreed to perform investigations of selected sites to evaluate potential or actual releases of hazardous substances, pollutants, or contaminants. This Pre-CERCLIS Site Screening Assessment (PCSSA) at the Beatrice Former Manufactured Gas Plant (FMGP) was performed by Jacobson Helgoth Consultants, Inc. (JHC) under a Task Order assigned by the NDEQ. The investigation was done under authority of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986.

1.1 Purpose

The purpose of this PCSSA is to collect information concerning conditions at a site sufficient to identify and assess potential hazards posed to human health and the environment. This PCSSA will be used to determine the possible need for further action under CERCLA or to recommend No Further Remedial Action Planned (NFRAP) status.

This PCSSA includes analytical results from field activities conducted in March 2001 and from other field activities conducted in 1992.

1.2 Objectives

The objectives for this project includes:

- Identifying potential source areas of contamination and targets;
- Documenting whether a release of a hazardous substance has occurred;
- Identifying any actual or potential immediate environmental impact or threat to human health that may warrant a removal action;
- Limited sampling of potential targets; and

- Determining whether the contamination can be attributed to the potential source area(s).

SECTION 2.0
SITE DESCRIPTION AND HISTORY

2.1 Site Location and Description

The City of Beatrice is located approximately 30 miles south of Lincoln, Nebraska, on State Highway 77 in Gage County, Nebraska. The legal description is the SE 1/4, SW 1/4 of Section 33, Township 4 North, Range 6 East (Ref. 2). The geographic coordinates are latitude 40° 15' 51.45" North; longitude 96° 45' 11.52" West (Ref. 1). The Former Manufactured Gas Plant (Site) is located near 1st and Market Street. The inactive Site is directly adjacent and east from the Big Blue River. An Area Location Map, a Site Location Map, an Aerial Photograph and a small-scale topographic map of the area are provided in Appendix A. The area topographic map showing 4-mile radius rings for population estimate is attached in Appendix D.

Additional information includes information collected from the Beatrice Library which indicated that the location of the electric utility might have changed because of road name changes and area redevelopment. The following are the various addresses found for the Beatrice Electric Company.

- Year 1888 – Northwest corner of Front and Elk Streets,
- Year 1890 – 1st Street, between Elk and Ella,
- Year 1896 – (no plant address given)
- Year 1898 – 301 N. 1st Street, (Same as Front and Elk Street location in 1888, 1st Street is the same as Front Street).
- Years 1902-1911 – The business name was given, but there was no address for the plant.

The current Site is located on 1st Street, south of Market, between the Big Blue River and the railroad tracks.

2.2 Background Information

Manufactured gas plants were also known as gas works or town gas plants. These facilities were in use between the 1800s and the 1960s. Most plants were closed in the late 1940s because of the availability of natural gas. The manufactured gas was used for heating, in gas lights and the gas was also used to convert to electricity. The manufacturing process, using coal, left contaminant byproducts (often of the coal-tar variety) that, at some facilities, have impacted ground water and soil. Table 1 shows coal-derived chemicals that are associated with most of the contaminant byproducts from the manufacturing process.

Table 1
Coal-Derived Chemicals

Conventional	Inorganics	Metals	Volatile Aromatics	Phenolics	PAHs
pH	Ammonia	Aluminum	Benzene	Phenol	Acenaphtene
5 day BOD	Cyanide	Antimony	Ethylbenzene	2-Methyl phenol	Acena-phthylene
COD	Nitrate	Arsenic	Toluene	2-Methyl phenol	Anthracene
TOC	Sulfate	Barium	Xylene	2,4-Dimet-hylphenol	Benzo(a) pyrene
TSS	Sulfide	Cadmium			Benzo(b) fluoranthene
Oil and Grease	Thio cyanates	Chromium			Benzo(g,h,i) perylene
Phenols(4-AAP)		Copper			Benzo(k) fluoranthene
		Iron			Chrysene
		Lead			Dibenzo(a,h) anthracene
		Manganese			Fluoranthene
		Mercury			Naphthalene
		Nickel			Indeno(1,2,3-c,d)pyrene
		Selenium			Phenanthrene
		Silver			Pyrene
		Vanadium			
		Zinc			

2.3 Previous Investigations

The manufacturing process and associated waste byproducts have been identified from a previous field investigation conducted in 1992 (Ref 4). The field investigation was conducted by HDR in 1992 for Minnegasco of the former Centel Former Manufactured Gas Plant. It appears that chemical analysis

conducted on both ground water and soils verify that the Site has been impacted by process contaminants. Ground water was collected and analyzed at three locations across the Site. Table 2 shows the analytical results for ground water samples collected during the 1992 Site investigation.

Table 2
Ground Water Analytical Results
1992 Field Activities, Beatrice FMGP

Contaminants	Ground Water Sampling Locations		
	MW-101	MW-103	MW-106
VOCs	**mg/L**	**mg/L**	**mg/L**
Benzene	12.0	.920	<.005
Ethylbenzene	2.80	1.30	.092
Toluene	.75	.075	<.005
Xylene	2.40	.800	.018
Semi-VOCs			
Acenaphthene	.380	1.20	.074
Fluorene	<.200	.580	.026
2-Methyl naphthalene	1.50	1.20	<.0.10
Naphthalene	4.90	7.80	.120
Phenanthrene	.370	1.30	.020
Metals			
Arsenic	0.015	0.013	0.011
Barium	0.38	0.28	0.82
Chromium	<0.010	<0.010	0.026
Copper	<0.020	<0.020	<0.020
Lead	<0.0050	0.0062	0.019
Nickel	<0.040	<0.040	0.055
Vanadium	<0.010	<0.010	0.048
Zinc	0.059	0.058	0.14
General Inorganics			
Cyanide	0.17	<0.010	

SECTION 3.0
FIELD ACTIVITIES

Field activities at the Site began in March 2001. Contractor personnel on-site included Mr. Bruce Haley of Jacobson Helgoth Consultants, Inc., and Mr. Doug Roy of Environmental Priority Service, Inc. (EPS). Mr. Bob Zimmerman was on-site representing the NDEQ. Photographs of the potential source area are included in Appendix B.

Equipment used during this field event included the following: a full-sized van that contained a Geoprobe® direct push unit and a mobile gas chromatograph (GC).

The primary objective of the PCSSA was to verify contamination and identify potential source/s of subsurface or surface contamination that could present actual or potential threats to the environment or human health.

Direct push technology was used to collect ground water and soil sampling media from the Site. Information was collected from four sampling points/locations as shown on the Site Location Map. The map is included in Appendix A.

3.1 Sample Locations and Rationale

Sampling locations were selected based on the closeness of the Site to the Big Blue River and the local ground water flow direction. P-1 was selected as the probable background location at the north end of the Site. The probe location was near the northwest corner of what was left of the foundation of the office building. P-2 was selected based on the location of the suspected containment vessel. What is left of the containment vessel area is the round concrete foundation. P-2 was also located on the downgradient side of the remaining concrete foundation.

3.2 Analytical Results

The ground water samples were collected from three probe locations across the Site. Sample location P-2 was selected as a confirmation sample based on the

color and odor of the sample. The confirmation sample was sent to an off-site analytical laboratory for analysis (Ref 9, 10).

Tables 3 and 4 present the analytical results for soil and ground water samples analyzed by the on-site mobile laboratory for BTEX. An on-site ground water sample was not analyzed for P-3 because of the collection of free product. The reason for not conducting the analysis is because of the potential damage to the analytical equipment from the free product.

Table 3
On-Site
Analytical Sampling Results, Ground Water (BTEX)
Beatrice FMGP
Beatrice, Nebraska
March 22, 2001

Sample ID	Depth	Benzene	Toluene	Ethylbenzene	Xylene
P-1	21′	1.6	6.6	11.7	43.0
P-2	15′	236	26.7	860	211
P-3	20′	Free product	Free product	Free product	Free product
P-4	Dry	NA	NA	NA	NA

Results are in ppb – Parts per billion
NA – not applicable

Table 4
On-Site
Analytical Sampling Results, Soil (BTEX)
Beatrice FMGP
Beatrice, Nebraska
March 22, 2001

Sample ID	Depth	Benzene	Toluene	Ethylbenzene	Xylene
P-1	5′	ND	ND	ND	ND
P-1	10′	ND	ND	ND	ND
P-2	5′	ND	ND	ND	ND
P-2	10′	ND	ND	ND	ND

Table 4 (continued) On-Site Analytical Sampling Results, Soil (BTEX) Beatrice FMGP Beatrice, Nebraska March 22, 2001					
Sample ID	**Depth**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylene**
P-3	5′	ND	ND	ND	ND
P-3	10′	ND	ND	ND	ND
P-4	5′	ND	ND	ND	ND
P-4	10′	ND	ND	ND	ND

Results are in ppb – Parts per billion

Tables 5, 6, 7 and 8 represent the analytical results of the ground water sample collected at P-2 and analyzed at the off-site laboratory. Table 5 are of those eight Resource Conservation and Reauthorization Act (RCRA) that are above the method detection limit (MDL). Table 6 is volatile organics analyzed using EPA Method 8260. Table 7 is semi-volatile organics analyzed using EPA Method 8270. Table 8 is extractable hydrocarbons analyzed using EPA Method 8015.

Table 5 Off-Site Analytical Sample Results, Ground Water Metals, Method 6010 Beatrice FMGP Beatrice, Nebraska March 22, 2001			
Sample Analysis Conducted On P-2; collected at a depth of 15 feet			
Analyte	**Result, mg/L**	**MCL**	**Quantitation Limit**
Arsenic	1.23	0.05	0.80
Barium	3.15	2	0.10
Chromium	0.21	0.1	0.20
Mercury	0.00036	0.002	0.0002

Results are in ppm – Parts per million

Table 6 Off-Site Analytical Sample Results, Ground Water Volatiles, Method 8260 Beatrice FMGP Beatrice, Nebraska March 22, 2001			
Sample Analysis Conducted On P-2; collected at a depth of 15 feet			
Analyte	**Result, µg/L**	**MCL**	**Quantitation Limit**
Benzene	939	5	100
n-Butylbenzene	8.9	NA	5
tert-Butybenzene	16.2	NA	5
Ethylbenzene	847	700	5
Isopropylbenzene	30.8	NA	5
Naphthalene	7,250	NA	120
n-Propylbenzene	14.6	NA	5
Toluene	14.9	1,000	5
1,2,4-Trimethylbenzene	179	NA	5
1,3,5-Trimethylbenzene	148	NA	5
Xylenes, Total	379	10,000	15

Results are in ppb – Parts per billion

Table 7 Off-Site Analytical Sample Results, Ground Water Semi-Volatiles, Method 8270 Beatrice FMGP Beatrice, Nebraska March 22, 2001			
Sample Analysis Conducted On P-2; collected at a depth of 15 feet			
Analyte	**Results, µg/L**	**MCL**	**Quantitation Limit**
Acenaphthene	1,960	NA	1,100
Anthracene	551	NA	110
Benzo(a)anthracene	249	NA	110

Table 7 (continued) Off-Site Analytical Sample Results, Ground Water Semi-Volatiles, Method 8270 Beatrice FMGP Beatrice, Nebraska March 22, 2001			
Analyte	**Results, µg/L**	**MCL**	**Quantitation Limit**
Benzo(k)fluoranthene	135	NA	110
Benzo(a)pyrene	252	0.2	110
Benzo(ghi)perylene	112	NA	110
Chrysene	224	NA	110
Fluoranthene	648	NA	110
Fluorene	610	NA	110
2-Methylnapthalene	2,610	NA	1,100
Naphthalene	11,300	NA	1,100
Phenanthrene	2,400	NA	1,100
Pyrene	818	NA	110

Results are in ppb – Parts per billion

Table 8 Off-Site Analytical Sample Results, Ground Water Extractable Hydrocarbons, Method 8015 Beatrice FMGP Beatrice, Nebraska March 22, 2001			
Sample Analysis Conducted On P-2; collected at a depth of 15 feet			
Analyte	**Result, µg/L**	**MCL**	**Quantitation Limit**
Total Extractable Hydrocarbons	224,000	NA	7,600
Diesel	201,000	NA	7,600
Motor Oil	22,700	NA	7,600

Results are in ppb – Parts per billion

SECTION 4.0
GROUND WATER MIGRATION PATHWAY

The possible release of FMGP contaminants to ground water was the primary environmental concern at Beatrice. A discussion of migration pathways follows.

4.1 Geology

Glacial till of low permeability covers most of the area in the vicinity of Beatrice, Nebraska. Pleistocene deposits of loess, glacial material, shale and limestone compose the surface materials at the Site. The uppermost units of bedrock underlying Gage County include limestone and calcareous shale of Lower Permian Age and limestone and shale of Pennsylvanian Age (Ref 3, 8).

4.2 Hydrogeology

The Site is within the Southeastern Glacial Drift Ground Water Region of Nebraska. The primary units from which ground water is obtained are sand and gravel deposits associated with paleovalleys and along some modern stream valleys (Big Blue River); these are usually of limited extent. Nearly all major water supplies in this region come from paleovalleys. The water quality varies from good (but hard) to very hard, with the sulfate and iron content often exceeding acceptable limits (Refs. 8, 11).

The Dakota Group serves as a secondary source of ground water where the primary Pleistocene sources are insufficient to meet water-supply needs. Because of its geologic variability, the Dakota Group's capacity to yield ground water can differ over short distances; consequently, well yields can be difficult to predict. The thickness of the saturated ground water-bearing units is generally less than 300 feet. Depth to the regional water table varies as a function of topographic location. In upland areas, depth to water may be greater than 200 feet, while it may be less than 50 feet in the bottomlands of the principal valleys. Depending on the ground water-bearing unit and its location, total dissolved solids may differ from 200 to more than 1,000 parts per million (ppm). In some

areas, the Dakota Group may have total dissolved solids exceeding 5,000 ppm (Refs. 8, 11).

In many locations where these units are not available, perched ground water is used. Perched water conditions occur in areas underlain by glacial till. Water from precipitation or applied from irrigation moves readily through loess and/or isolated lenses of sand and gravel, but not through glacial till. As a result, water saturates the sediments above the till and a perched water table forms. Many domestic farm and stock wells have been developed in these perched water bodies. Because of the variability in water quality and in the limited distribution of ground water-bearing units, rural water districts are common (Ref. 3, 8).

Depth to the regional water table ranges from less than 50 feet to more than 100 feet. The saturated thickness of several geologic units range from about 0 feet to less than 100 feet. Ground water flow direction near the Site is generally toward the south-southeast. Depth to ground water varies. At the Site, the depth to water varied from 15-20 feet. A Ground Water Flow Direction Map is in Appendix A.

4.3 Soils

Because the Site is located directly adjacent to the Big Blue River, the Hobbs-Judson association has been identified as the prominent soils in the area (Ref. 3). The Hobbs-Judson association is generally found on low valley bottoms, terraces and foot slopes. The soils are well drained and comprise approximately 6 percent of the County. The Hobbs soils are medium textured deposited by streams. The soils are very dark grayish brown silty loam. The Judson soils are the most extensive across the foot slopes. A Soils Map is in Appendix A.

4.4 Ground Water Use and Targets

Beatrice has an eleven well municipal well field, located approximately six miles northwest from the Site, that provides water to most of the area. The wells supply water to a blended system. There are 18 registered private wells within four miles of the site (Ref. 12). The wells are domestic water supply wells that

can be regarded as potential ground water targets. The well registrations are in Appendix B. Distribution of the potential ground water target population is summarized in the following table.

Table 9
Potential Targets and Ground Water Intakes
Beatrice, Nebraska

Target Distance Limit	Number of Wells	Potential Targets
0-1 mile	0	7,100
1-2 miles	4	5,200
2-3 miles	11	148
3-4 miles	7	252

Based upon information from the 1990 census and topographic maps of the area, approximately 12,300 people get their drinking water from wells located within four miles of the site. It is important to remember that Beatrice itself, exists in a remedial action class #3 ground water zone, where the ground water in the area is not used for consumption. This is the reason that the municipal wells have been relocated approximately six miles northwest of Beatrice.

4.5 Wellhead Protection

A wellhead protection area was established for the well field that supplies public drinking water to Beatrice in March 1991. The wellhead protection area is within the Lower Big Blue Natural Resource District.

4.6 Ground Water Conclusions

Ground water samples were collected from four sampling locations across the Site. On-site analysis for BTEX was conducted on two of the four samples. One of the two samples not analyzed contained or was essentially "free product" and was not analyzed because of the potential damage to the analytical equipment. Another sample was not collected because the hole was dry. A duplicate ground water sample was collected from P-2 and submitted to the off-site laboratory for confirmation analysis. Both on-site and off-site analysis confirmed that the ground water pathway was impacted by wastes likely to be generated from the manufactured gas plant.

SECTION 5.0
SURFACE WATER MIGRATION PATHWAY

Beatrice is located in the flood plain of the Big Blue River. The Big Blue River is in an area of low rolling hills that slope southeast. The topography at Beatrice is relatively flat, but surface water will typically follow the topography and therefore, the runoff should be toward the southeast. (Refs. 2, 3).

5.1 Surface Water Targets

There is one surface water intake used for domestic water use in Gage County. This intake is in Bear Creek. The major surface water target near the Site is the Big Blue River. There are no domestic use surface water intakes within 15 miles of Beatrice along the Big Blue River (Ref. 6). The Big Blue River is used as a designated fisheries in the area. The river is deep and wide enough to support fishing for consumptive use along the river until it leaves the State.

Several threatened and endangered species have been identified in Gage County (Ref. 7). The following table identifies those species that may be in the area.

Table 10
Endangered and Threatened Species
Gage County Region

Common Name	Scientific Name	State Status	Federal Status
Plants			
NA			
Birds			
Eskimo Curlew	*Numenius borealis*	Endangered	Endangered
Bald Eagle	*Haliaeetus leucocephalus*	Threatened	
Mammals			
Swift Fox	*Vulpes velox*	Endangered	
Black-footed Ferret	*Mustela nigripes*	Endangered	Endangered

No known state or federally listed threatened or endangered species is a permanent resident of Beatrice (Ref. 7).

5.2 Wetlands

The nearest wetland area is in the Big Blue River (Ref. 5). The river itself is identified as a "R2UBH". This designation is described as follows; (R) Riverine, (2) Lower Perennial, (UB) Unconsolidated Bottom, and (H) Permanently Flooded. Islands within the river are identified as "PSSA". The description is (P) Palustrine, (SS) Scrub-Shrub, and (A) Temporarily Flooded. No other land surface wetlands have been identified within the town limits. Other wetlands have been identified down stream along the Big Blue River.

5.3 Surface Water Conclusions

Because of the location of the Big Blue River to the Site, there is concern that wastes from the Site's manufacturing process may have impacted the river from surface water run-off. There is also concern that ground water contamination may have leached into the river.

SECTION 6.0
SOIL EXPOSURE AND AIR MIGRATION PATHWAYS

6.1 Soil and Air Targets

People who may come in contact with contaminated soil would be potential targets for the soil and air pathways. The Site is currently not in use. The buildings, containment vessel and associated piping have been removed. The property is owned by the City of Beatrice, but no City activities are conducted there.

6.2 Soil Exposure and Air Migration Pathways Conclusions

The soils around Beatrice consist of the Hobbs-Judson association, where the soils are "found mainly on low valley bottoms, low terraces and foot slopes" (Ref. 3). Some of the soils are well drained. This association makes up about 6 percent of the County.

SECTION 7.0
SUMMARY AND CONCLUSIONS

The field activities associated with this investigation included the collection and analysis of two of four ground water samples. Duplicate ground water samples from location P-2 were sent to the off-site lab for confirmation analysis. The analytical results verified impact to the ground water pathway. The contaminants of concern, presented in Table 1, are associated with VOC, Semi-VOCs, PAHs and metals. The contaminants with the greatest concentrations include naphthalene, acenaphthene, phenanthrene, Total Extractable Hydrocarbons, Diesel and Motor Oil.

JHC recommendations for this project are based on the following:

- The on-site ground water analysis did show impact to the ground water pathway by VOCs, Semi-VOCs and PAHs.
- The ground water sample from P-3 was not analyzed because it was suspected to be "free product" and thus there was the potential for equipment problems.
- The off-site analysis verified the limited on-site analysis.
- Soil sample analysis could not confirm contamination.

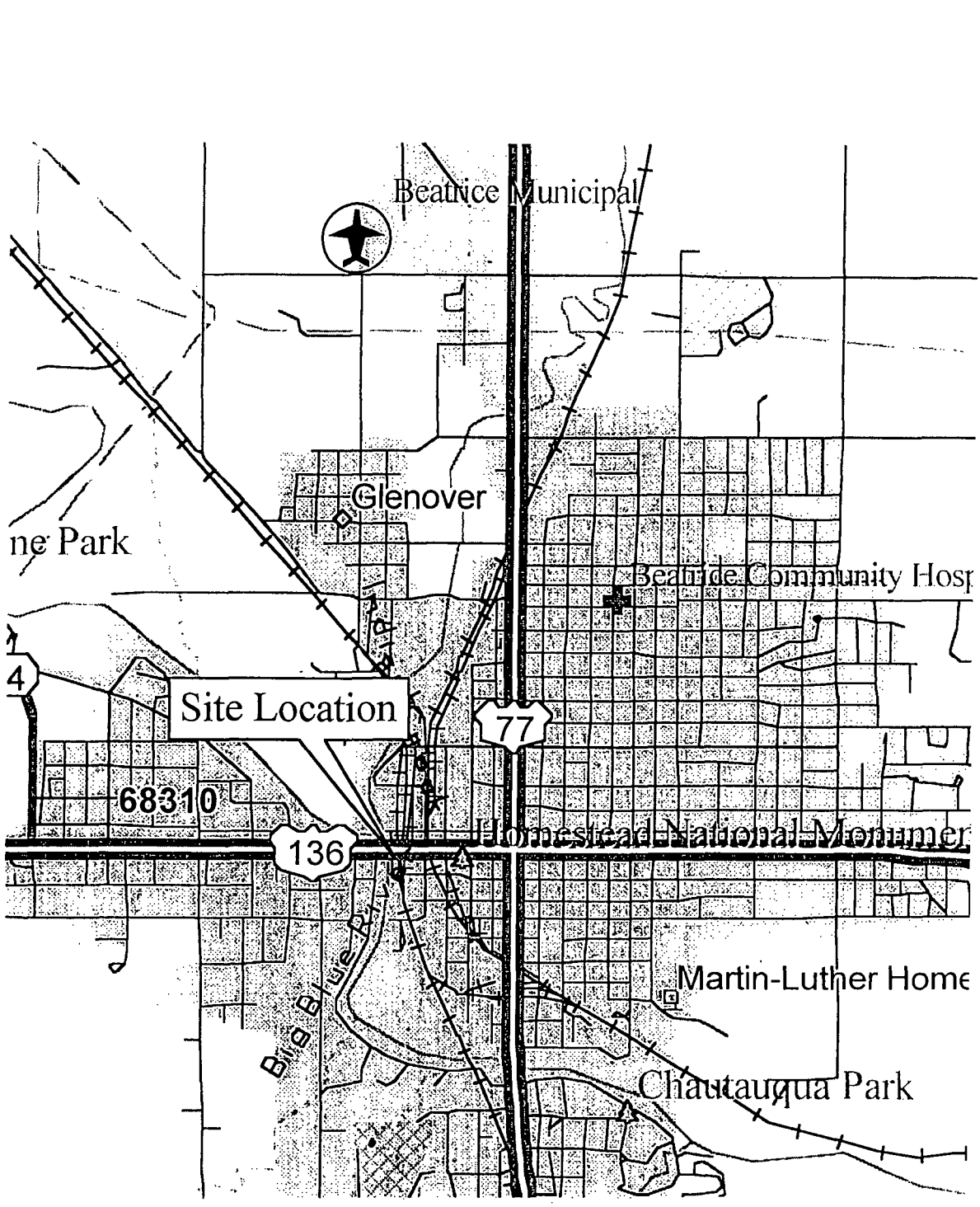
Jacobson Helgoth Consultants recommends listing the site on CERCLIS and conducting further site assessment under CERCLA to determine potential impact to human health and the environment.

SECTION 8.0
REFERENCES

1. US Geological Survey, Digital Raster Graphics, automatic latitude and longitude.
2. US Geological Survey 7.5 Minute Quadrangle Topographic Map for: Beatrice, Nebraska. This is a population radius map that combines the Topographic Quadrangle Maps of Beatrice West, Beatrice East, Odell, and Blue Springs.
3. Soil Survey of Gage County, Nebraska, USDA Soil Conservation Service, University of Nebraska Conservation and Survey Division, 1964.
4. UtiliCorp United, Phase I investigation, 1992, Beatrice Former Manufactured Gas Plant.
5. Department of the Interior United States Fish and Wildlife Division Wetlands Map, Interactive Mapping Program.
6. List of Municipal of Drinking Water Supplies from Surface water Intakes in Nebraska, Department of Water Resources, Online Service.
7. Department of the Interior, United States Fish and Wildlife Division Threatened and Endangered Species List, Nebraska, 1993.
8. The Ground Water Atlas of Nebraska, Resource Atlas No. 4, Conservation and Survey Division, University of Nebraska, 1986.
9. Test America analytical results for Beatrice, Nebraska, 2001.
10. Environmental Priority Service Analytical Results.
11. US Geological Survey, Ground Water Atlas of the United States, Segment 3, 1997.
12. Department of Natural Resources, Domestic Well Registrations.

APPENDIX A

MAPS AND FIGURES

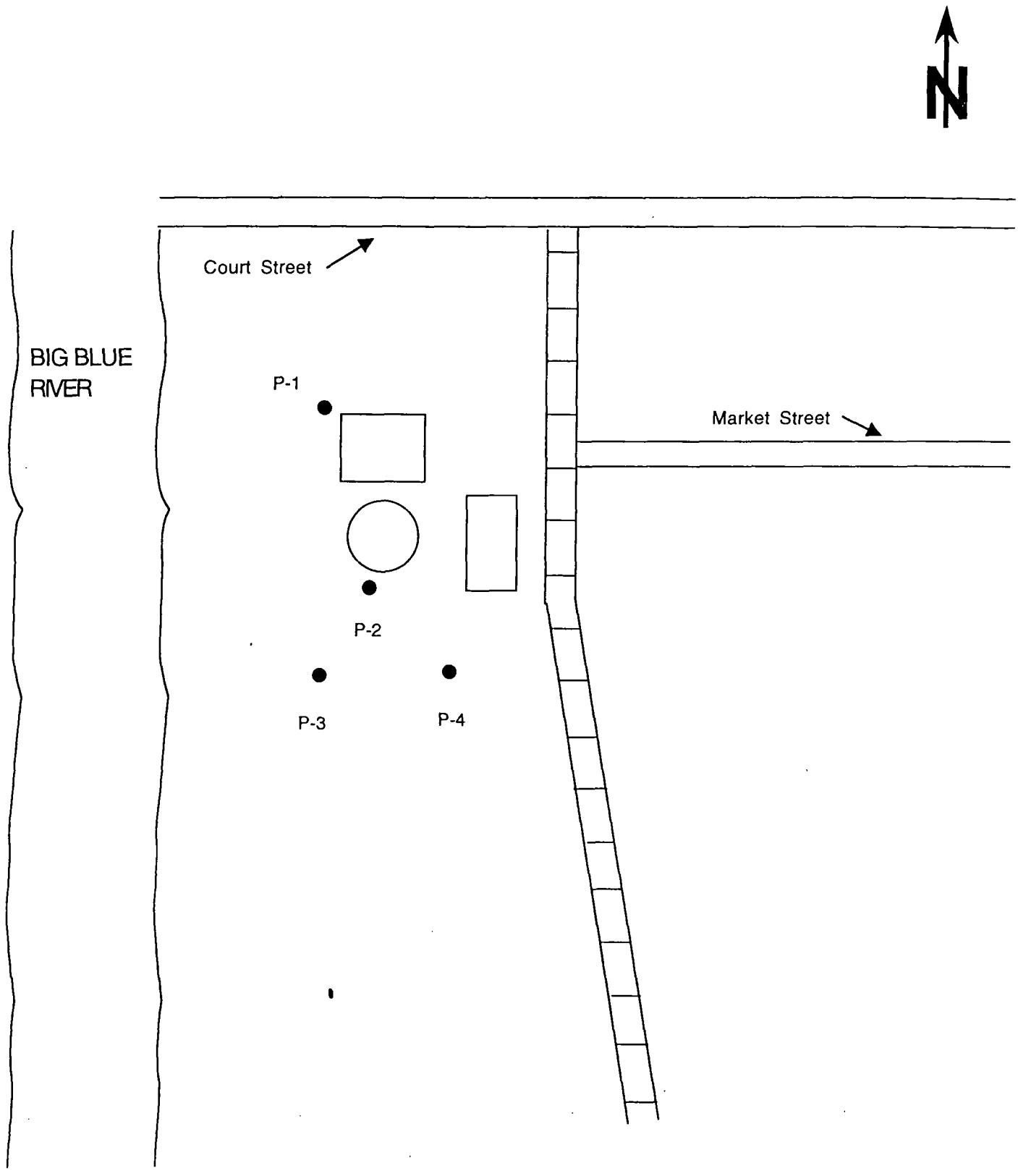


Jacobson Helgoth
CONSULTANTS

Date: 5-07-01
Scale: NTS
JHC No.: 362-26
Drawn By: KDG
Checked By: BWH
Figure:

AREA LOCATION MAP

Beatrice, Nebraska
NEBRASKA DEPARTMENT
OF ENVIRONMENTAL QUALITY

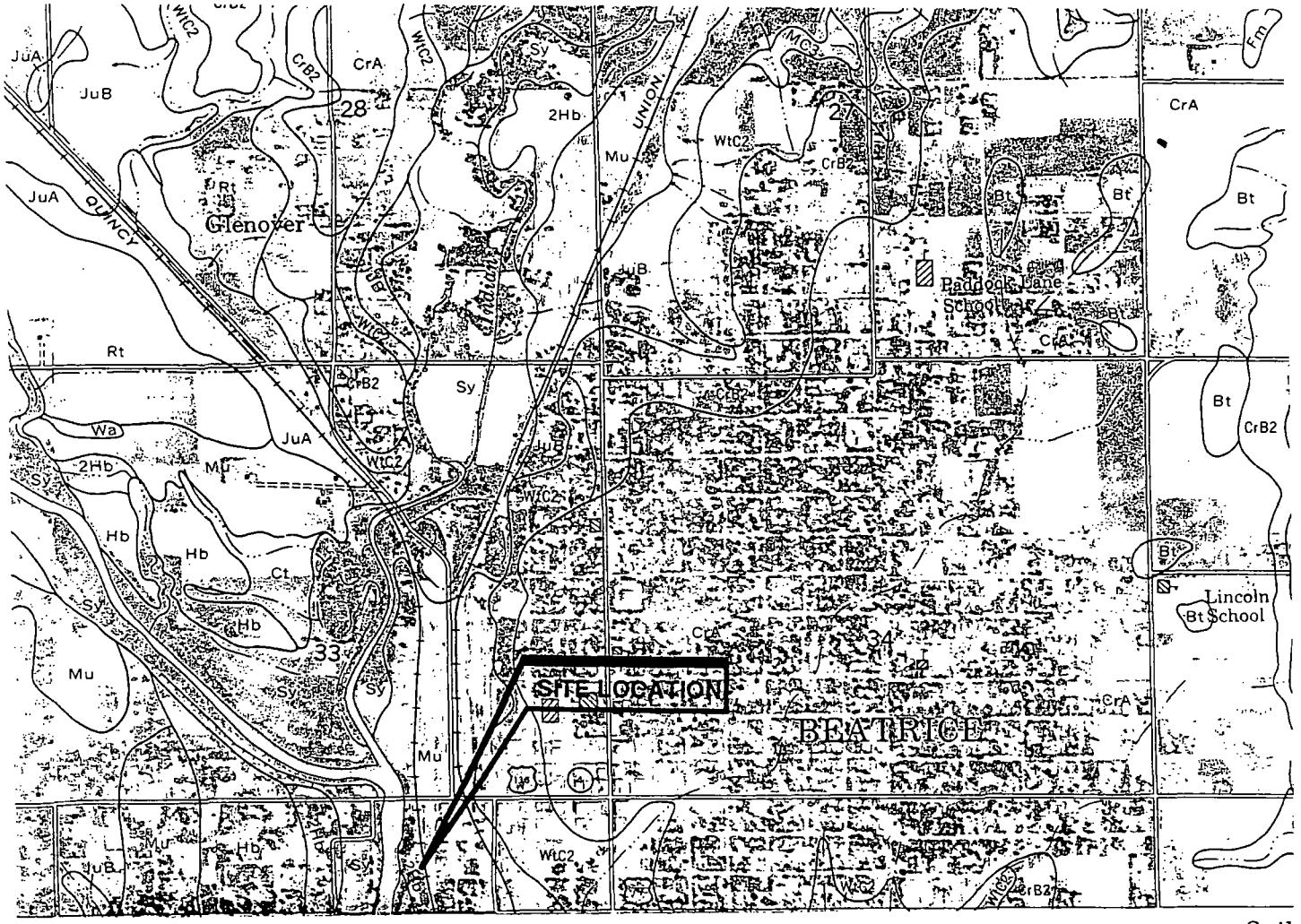


Jacobson Helgoth
CONSULTANTS

Date: 5-7-01	
Scale:NTS	
JHC No.:362-26	
Drawn By: BWH	
Checked By:	
Figure:	

SITE MAP

Beatrice, Nebraska
NEBRASKA DEPARTMENT OF
ENVIRONMENTAL QUALITY



Soil Survey
Gage County, Nebraska 1964

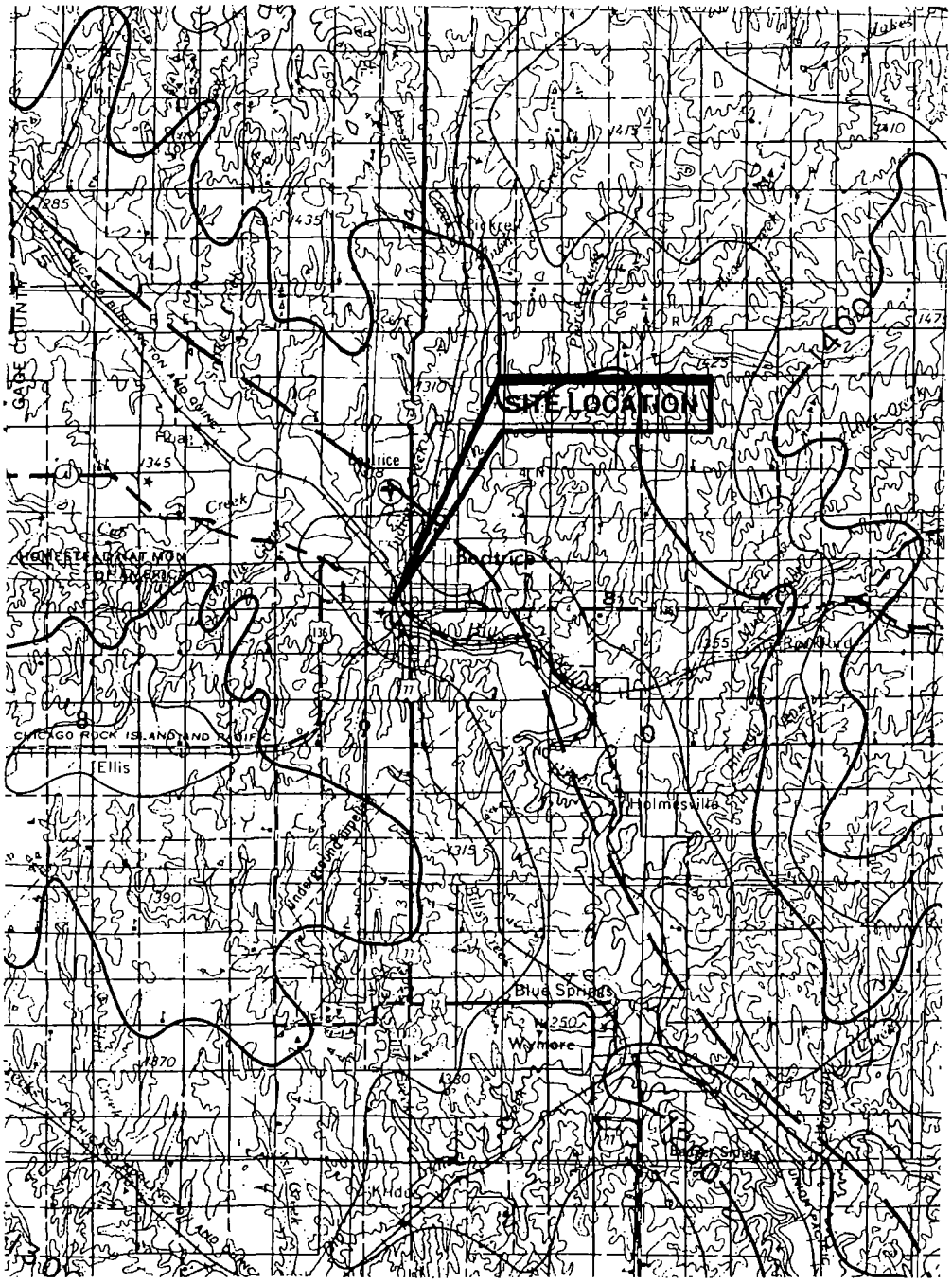
Jacobson Helgoth
CONSULTANTS

Date: 5-07-01
Scale: NTS
JHC No.: 362-26
Drawn By: KDG
Checked By: BWH
Figure:

SOILS MAP

Beatrice, Nebraska

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY



N

Jacobson Helgoth
CONSULTANTS

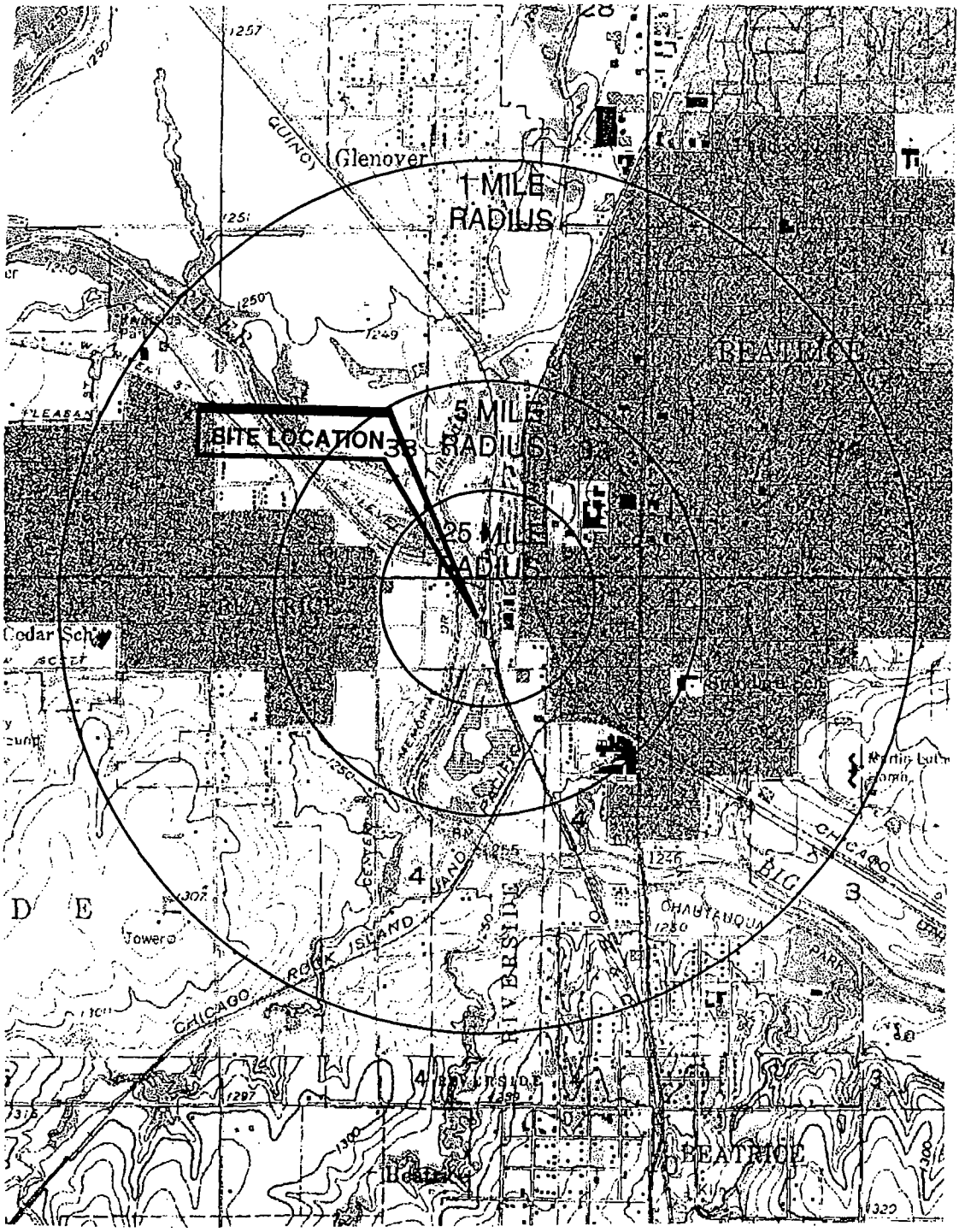
Date: 5-07-01	
Scale: NTS	
JHC No.: 362-26	
Drawn By: KDG	
Checked By: BWH	
Figure:	

GROUND WATER DIRECTION MAP

Beatrice, Nebraska

NEBRASKA DEPARTMENT
OF ENVIRONMENTAL QUALITY

R6E



T4N

T3N

Date: 5-07-01	
Scale: 1:24,000	
JHC No.: 362-26	
Drawn By: KDG	
Checked By: BWH	
Figure:	

Jacobson Helgoth
CONSULTANTS

TOPOGRAPHIC MAP

Beatrice, Nebraska
NEBRASKA DEPARTMENT
OF ENVIRONMENTAL QUALITY

Jacobson Helgoth
CONSULTANTS

Date: 5-07-01
Scale: NTS
JHC No.: 362-26
Drawn By: KDG
Checked By: BWH
Figure:

AERIAL PHOTOGRAPH

Beatrice, Nebraska

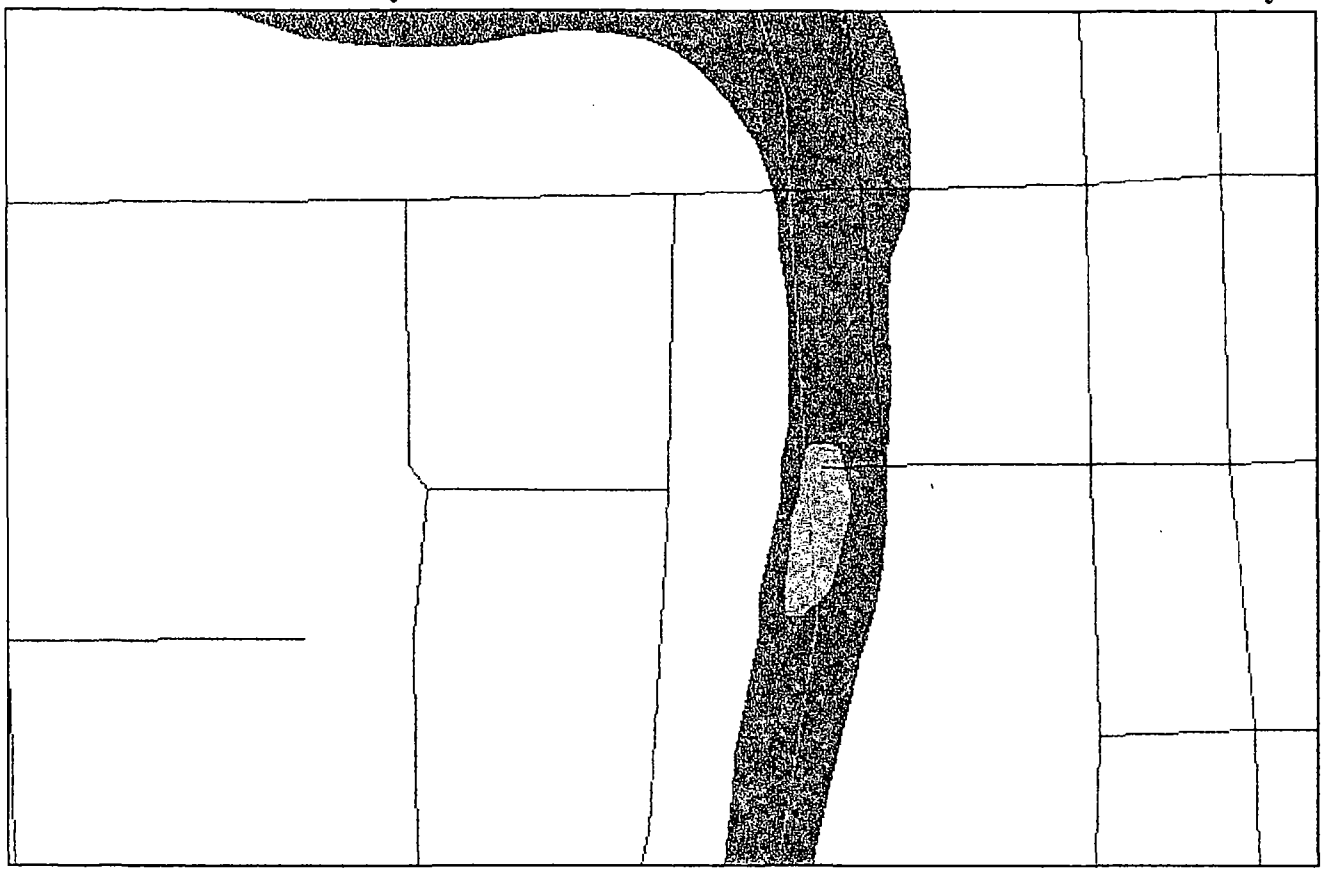
NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

APPENDIX B

PERTINENT INFORMATION

- Wetlands Map
- Threatened and Endangered Species
- Test America Analytical Results
- Beatrice Field Notes
- Access Agreements
- Photo Pages
- Well Registrations

Wetland Data Provided by the U.S. Fish and Wildlife Service's National Wetland Inventory



PSSA
R2UBH
Upland
No Data Available
Streams
Roads
States
Counties

N

100 0 100 200
meters

U.S. FISH & WILDLIFE SERVICE

Jacobson Helgoth CONSULTANTS

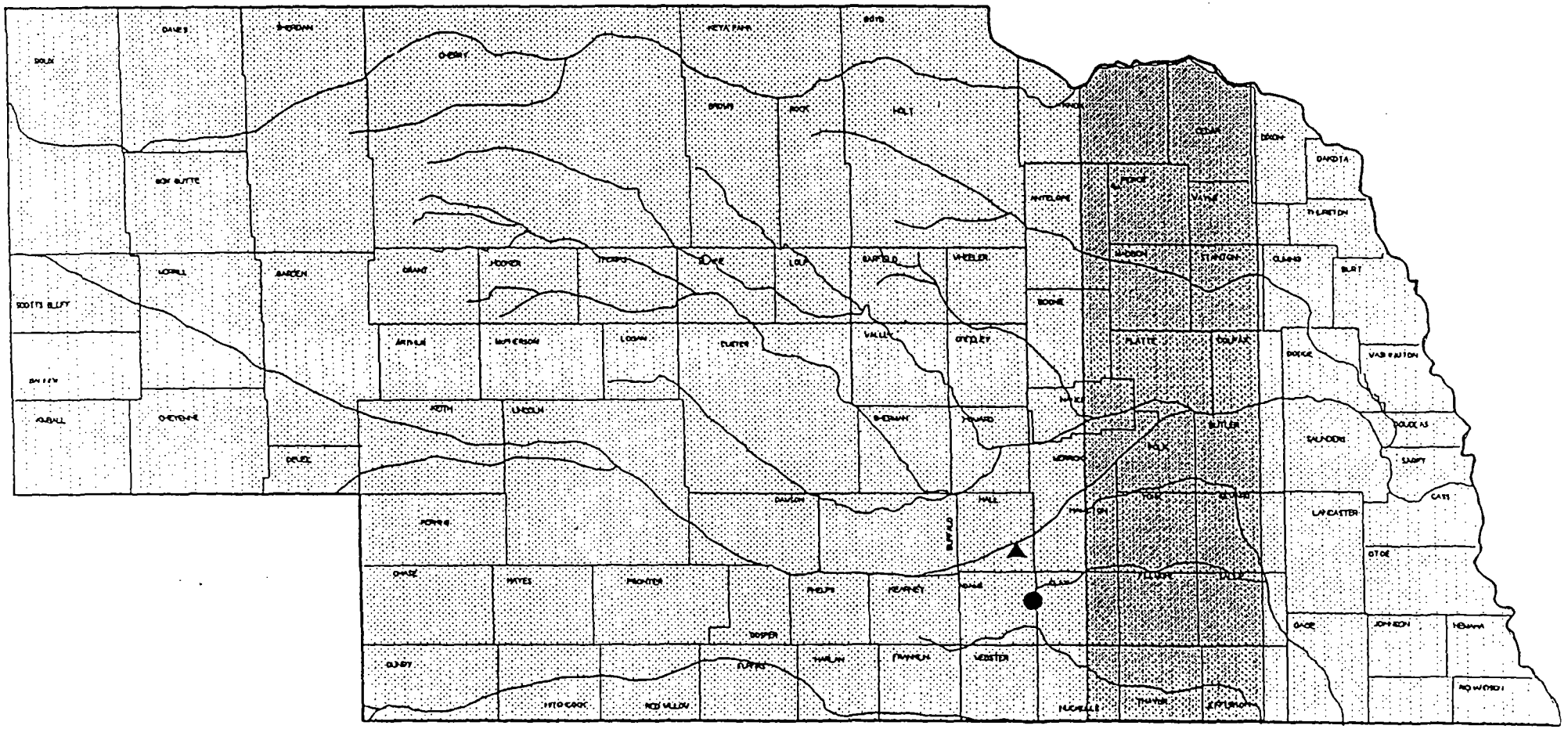
Date: 5-07-01
Scale: NTS
JHC No.: 362-26
Drawn By: KDG
Checked By: BWH
Figure:

WETLANDS MAP

Beatrice, Nebraska

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

Eskimo Curlew (Numenius borealis)
Historic Migration Distribution in Nebraska



GENERAL CORRIDOR

PRIMARY CORRIDOR

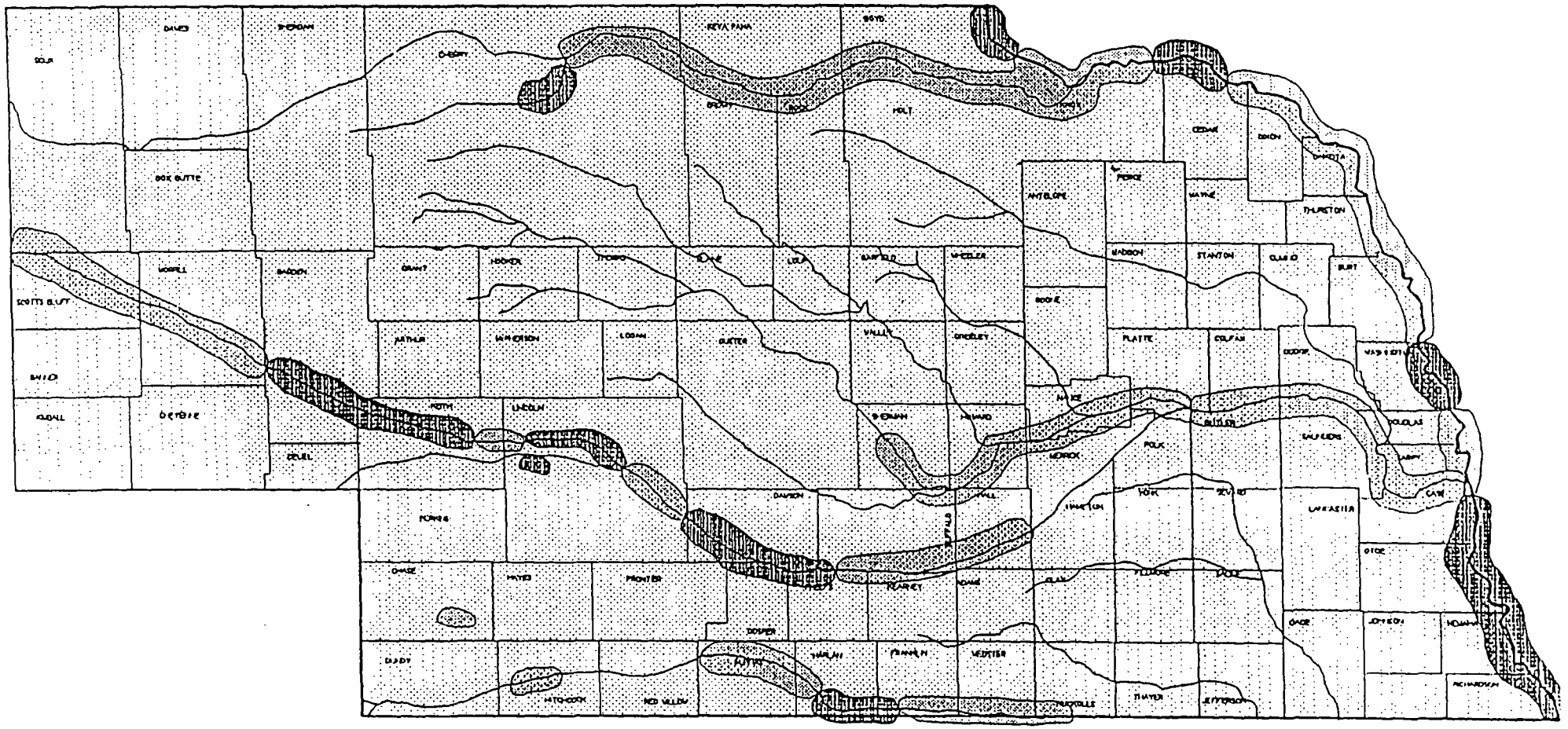
● 1926 CONFIRMED SIGHTING

▲ 1987 POSSIBLE SIGHTING

G. WINGFIELD
NGPC
JAN. 1993

Bald Eagle (Haliaeetus leucocephalus)

Wintering Distribution in Nebraska



OCCASIONAL

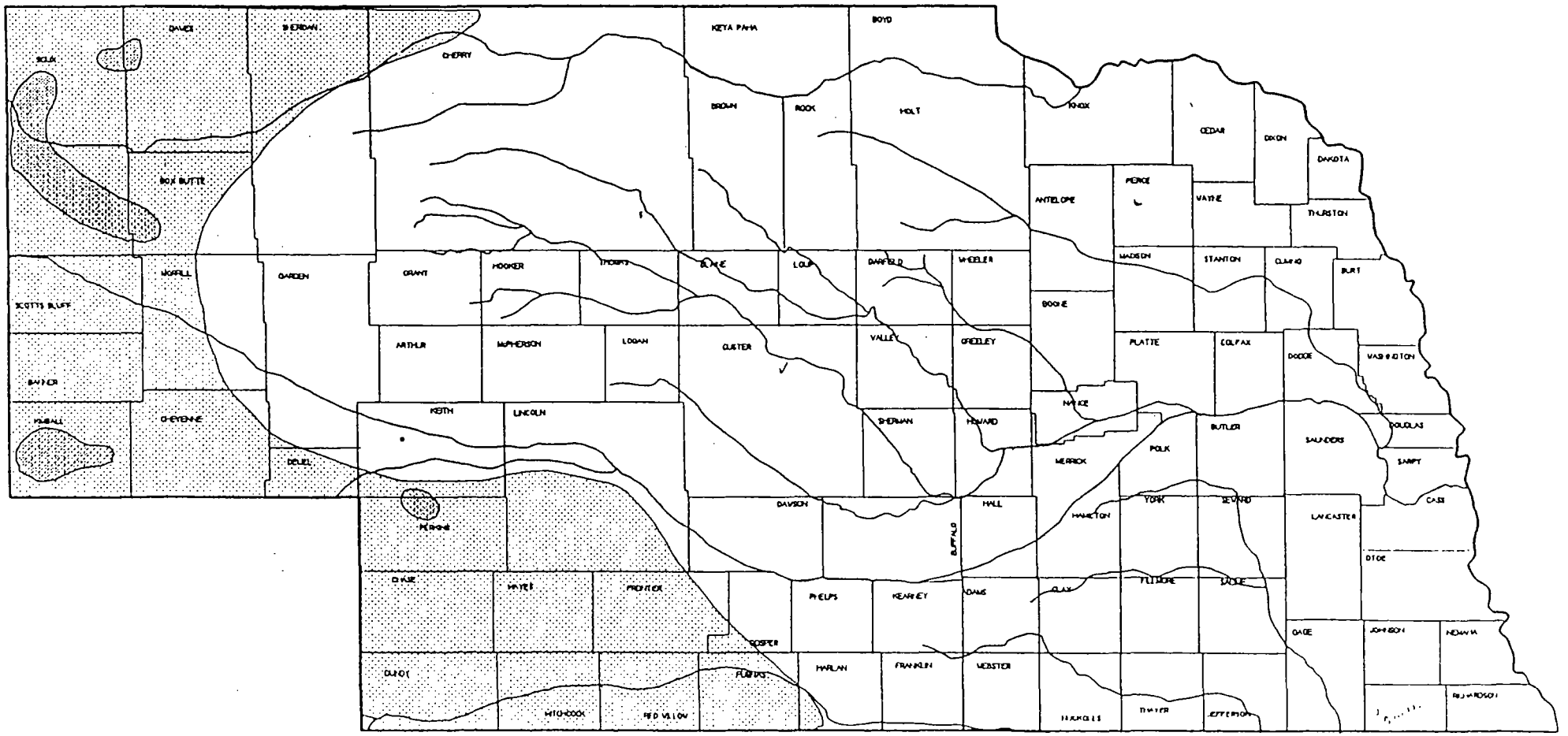
MODERATE DENSITY

HIGH DENSITY

G. WINGFIELD
NGPC
JAN. 1993

Swift Fox (Vulpes velox)

Distribution in Nebraska

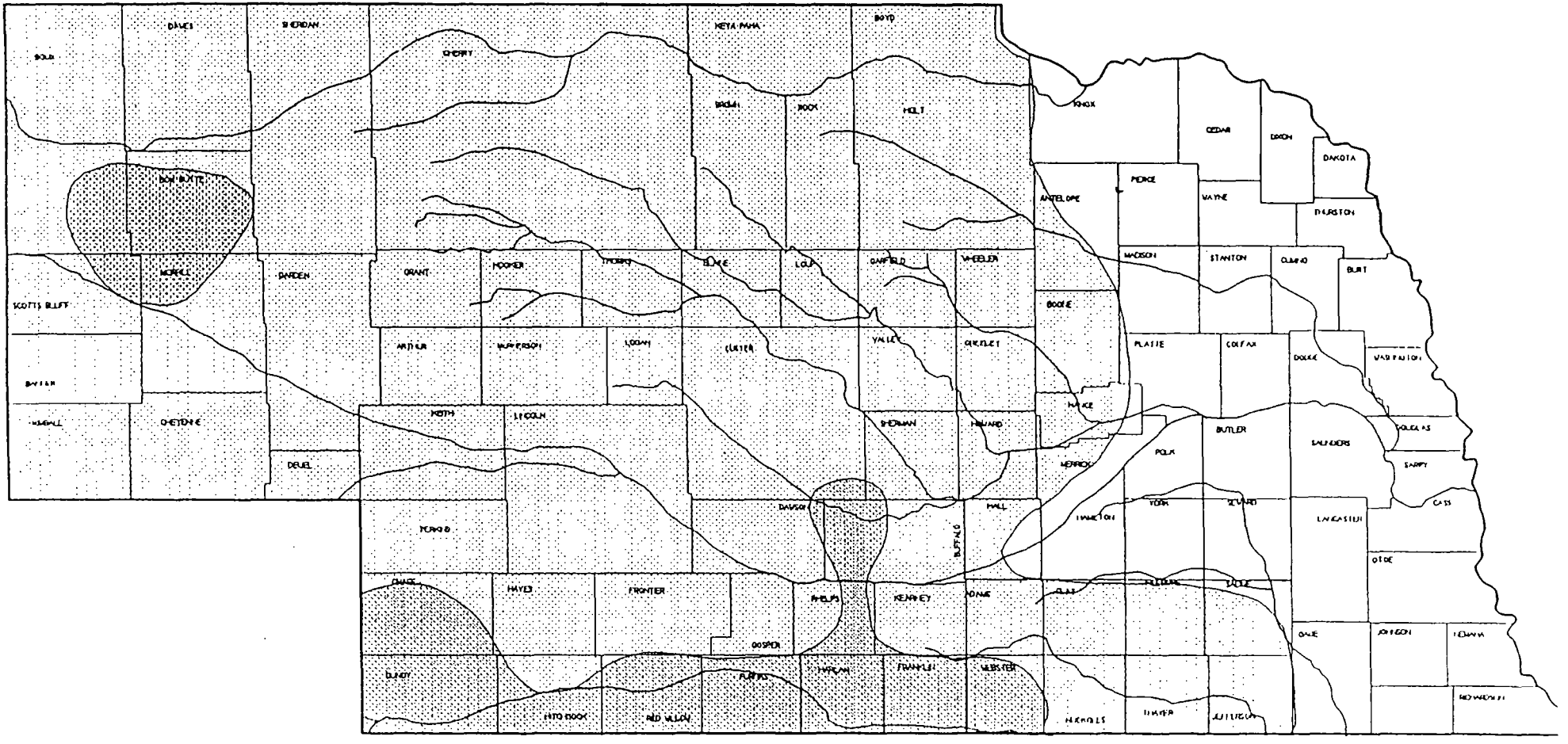


POTENTIAL HABITAT

CONCENTRATION AREAS

G. WINGFIELD
NGPC
JAN. 1993

Black-footed Ferret (Mustela nigripes)
Distribution of Potential Habitat in Nebraska



POTENTIAL HABITAT (PRAIRIE DOG RANGE)

HIGHEST PRAIRIE DOG DENSITY

G. WINOPIELD
NGPC
JAN. 1993

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611058

Project ID: Beatrice FMGP #362-26

Sample ID: P-2 Project #362-26

Date Taken: 03/22/2001

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
ICP Metals Prep	D	mg/L	UD	rmp	03/28/2001		
Mercury,Cold Vapor	0.00036	mg/L		lmc	03/29/2001	EPA 245.1	0.0002
ICP Metals - SW-6010B	Complete			heh	03/30/2001	SW 6010B	
Arsenic, ICP	1.23	mg/L		heh	03/30/2001	SW 6010B	0.80
Barium, ICP	3.15	mg/L		heh	03/30/2001	SW 6010B	0.10
Cadmium, ICP	<0.20	mg/L		heh	03/30/2001	SW 6010B	0.20
Chromium, ICP	0.21	mg/L		heh	03/30/2001	SW 6010B	0.20
Lead, ICP	<1.0	mg/L		heh	03/30/2001	SW 6010B	1.0
Selenium, ICP	<1.5	mg/L		heh	03/30/2001	SW 6010B	1.5
Silver, ICP	<0.20	mg/L		heh	03/30/2001	SW 6010B	0.20
Prep, BNA - AQUEOUS	COMPLETE			kje	03/26/2001	SW 3510	
VOLATILE COMPOUNDS - 8260							
Acetone	<100	ug/L		mmk	03/31/2001	SW 8260B	100
Benzene	939	ug/L		mmk	03/31/2001	SW 8260B	2
Bromobenzene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Bromochloromethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Bromodichloromethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Bromoform	<10	ug/L		mmk	03/31/2001	SW 8260B	10
Bromomethane	<20	ug/L		mmk	03/31/2001	SW 8260B	20
2-Butanone (MEK)	<50	ug/L		mmk	03/31/2001	SW 8260B	50
n-Butylbenzene	8.9	ug/L		mmk	03/31/2001	SW 8260B	5.0
sec-Butylbenzene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
tert-Butylbenzene	16.2	ug/L		mmk	03/31/2001	SW 8260B	5.0
Carbon Tetrachloride	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Chlorobenzene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0

UD - Unable to digest full amount of sample due to matrix problem.

R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611058

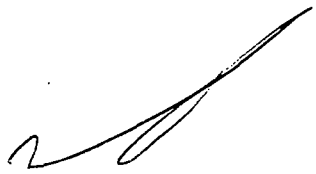
Project ID: Beatrice FMGP #362-26

Sample ID: P-2 Project #362-26

Date Taken: 03/22/2001

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
Chlorodibromomethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Chloroethane	<20	ug/L		mmk	03/31/2001	SW 8260B	20
Chloroform	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Chloromethane	<20	ug/L		mmk	03/31/2001	SW 8260B	20
2-Chlorotoluene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
4-Chlorotoluene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,2-Dibromo-3-Chloropropane	<50	ug/L		mmk	03/31/2001	SW 8260B	50
1,2-Dibromoethane (EDB)	<50	ug/L		mmk	03/31/2001	SW 8260B	50
Dibromomethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,2-Dichlorobenzene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,3-Dichlorobenzene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,4-Dichlorobenzene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Dichlorodifluoromethane	<15	ug/L		mmk	03/31/2001	SW 8260B	15
1,1-Dichloroethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,2-Dichloroethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,1-Dichloroethene	<10	ug/L		mmk	03/31/2001	SW 8260B	10
cis-1,2-Dichloroethene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
trans-1,2-Dichloroethene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,2-Dichloropropane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,3-Dichloropropane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
2,2-Dichloropropane	<20	ug/L		mmk	03/31/2001	SW 8260B	20
1,1-Dichloropropene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
cis-1,3-Dichloropropene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
trans-1,3-Dichloropropene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Ethylbenzene	847	ug/L		mmk	03/31/2001	SW 8260B	5.0



R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611058

Project ID: Beatrice FMGP #362-26

Sample ID: P-2 Project #362-26

Date Taken: 03/22/2001

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
Acenaphthylene	<110	ug/L		ake	04/02/2001	SW 8270C	110
Anthracene	551	ug/L		ake	04/02/2001	SW 8270C	110
Benzo(a)anthracene	249	ug/L		ake	04/02/2001	SW 8270C	110
Benzo(b)fluoranthene	<110	ug/L		ake	04/02/2001	SW 8270C	110
Benzo(k)fluoranthene	135	ug/L		ake	04/02/2001	SW 8270C	110
Benzo(a)pyrene	252	ug/L		ake	04/02/2001	SW 8270C	110
Benzo(ghi)perylene	112	ug/L		ake	04/02/2001	SW 8270C	110
Chrysene	224	ug/L		ake	04/02/2001	SW 8270C	110
Dibenzo(a,h)anthracene	<110	ug/L		ake	04/02/2001	SW 8270C	110
Fluoranthene	648	ug/L		ake	04/02/2001	SW 8270C	110
Fluorene	610	ug/L		ake	04/02/2001	SW 8270C	110
Indeno(1,2,3-cd)pyrene	<110	ug/L		ake	04/02/2001	SW 8270C	110
2-Methylnapthalene	2,610	ug/L		ake	04/03/2001	SW 8270C	1,100
Naphthalene	11,300	ug/L		ake	04/03/2001	SW 8270C	1,100
Phenanthrene	2,400	ug/L		ake	04/03/2001	SW 8270C	1,100
Pyrene	818	ug/L		ake	04/02/2001	SW 8270C	110
Extraction Prep	COMPLETE			tls	03/27/2001	IOWA-OA2	
EXTRACTABLE HYDROCARBONS-WATER							
Total Extractable Hydrocarbons	224,000	ug/L		mpc	03/29/2001	IA-OA2/S-8015	7,600
Diesel	201,000	ug/L		mpc	03/29/2001	IA-OA2/S-8015	7,600
Gasoline	<800	ug/L		mpc	03/28/2001	IA-OA2/S-8015	800
Motor Oil	22,700	ug/L		mpc	03/29/2001	IA-OA2/S-8015	7,600
VOA Preservation pH	<2	units		dmd	03/30/2001	SW 9041A	

R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611058

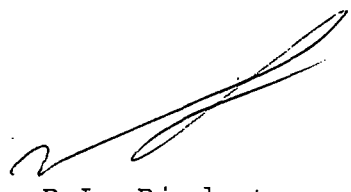
Project ID: Beatrice FMGP #362-26

Sample ID: P-2 Project #362-26

Date Taken: 03/22/2001

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
Hexachlorobutadiene	<25	ug/L		mmk	03/31/2001	SW 8260B	25
Isopropylbenzene	30.8	ug/L		mmk	03/31/2001	SW 8260B	5.0
p-Isopropyltoluene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Methylene Chloride	<25	ug/L		mmk	03/31/2001	SW 8260B	25
MTBE	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Naphthalene	7,250	ug/L		mmk	04/02/2001	SW 8260B	120
n-Propylbenzene	14.6	ug/L		mmk	03/31/2001	SW 8260B	5.0
Styrene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,1,1,2-Tetrachloroethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,1,2,2-Tetrachloroethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Tetrachloroethene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Toluene	14.9	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,2,3-Trichlorobenzene	<25	ug/L		mmk	03/31/2001	SW 8260B	25
1,2,4-Trichlorobenzene	<25	ug/L		mmk	03/31/2001	SW 8260B	25
1,1,1-Trichloroethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,1,2-Trichloroethane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Trichloroethylene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Trichlorofluoromethane	<20	ug/L		mmk	03/31/2001	SW 8260B	20
1,2,3-Trichloropropane	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,2,4-Trimethylbenzene	179	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,3,5-Trimethylbenzene	148	ug/L		mmk	03/31/2001	SW 8260B	5.0
Vinyl Chloride	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Xylenes, Total	379	ug/L		mmk	03/31/2001	SW 8260B	15
BNA - 8270 AQUEOUS							
Acenaphthene	1,960	ug/L		ake	04/03/2001	SW 8270C	1,100



R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611059

Project ID: Beatrice FMGP #362-26

Sample ID: P-2 5' Project #362-26

Date Taken: 03/22/2001

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
% Solids	77.31	%		sas	03/28/2001	SM 2540 G	1
Prep, BNA - NONAQUEOUS	COMPLETE			kje	03/26/2001	SW 3540	
VOLATILES 8260 NON-AQUEOUS			I				
Acetone	<50	ug/kg		mmk	03/28/2001	SW 8260B	50
Benzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Bromobenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Bromochloromethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Bromodichloromethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Bromoform	<10	ug/kg		mmk	03/28/2001	SW 8260B	10
Bromomethane	<20	ug/kg		mmk	03/28/2001	SW 8260B	20
n-Butylbenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
sec-Butylbenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
tert-Butylbenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Carbon tetrachloride	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Chlorobenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Chlorodibromomethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Chloroethane	<20	ug/kg		mmk	03/28/2001	SW 8260B	20
Chloroform	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Chloromethane	<20	ug/kg		mmk	03/28/2001	SW 8260B	20
2-Chlorotoluene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
4-Chlorotoluene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,2-Dibromo-3-chloropropane	<50	ug/kg		mmk	03/28/2001	SW 8260B	50
1,2-Dibromoethane	<50	ug/kg		mmk	03/28/2001	SW 8260B	50
Dibromomethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,2-Dichlorobenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0

I - Internal Standard outside of QC limits due to sample matrix.

R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611059

Project ID: Beatrice FMGP #362-26

Sample ID: P-2 5' Project #362-26

Date Taken: 03/22/2001

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
1,3-Dichlorobenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,4-Dichlorobenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Dichlorodifluoromethane	<15	ug/kg		mmk	03/28/2001	SW 8260B	15
1,1-Dichloroethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,2-Dichloroethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,1-Dichloroethene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
cis-1,2-Dichloroethene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
trans-1,2-Dichloroethene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,2-Dichloropropane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,3-Dichloropropane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
2,2-Dichloropropane	<20	ug/kg		mmk	03/28/2001	SW 8260B	20
1,1-Dichloropropene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
cis-1,3-Dichloropropene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
trans-1,3-Dichloropropene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Ethylbenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Hexachlorobutadiene	<25	ug/kg		mmk	03/28/2001	SW 8260B	25
Isopropylbenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
p-Isopropyltoluene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Methylene chloride	<50	ug/kg		mmk	03/28/2001	SW 8260B	50
MTBE	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Naphthalene	<25	ug/kg		mmk	03/28/2001	SW 8260B	25
n-Propylbenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Styrene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,1,1,2-Tetrachloroethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,1,2,2-Tetrachloroethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0

R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611059

Project ID: Beatrice FMGP #362-26

Sample ID: P-2 5' Project #362-26

Date Taken: 03/22/2001

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
Tetrachloroethene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Toluene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,2,3-Trichlorobenzene	<25	ug/kg		mmk	03/28/2001	SW 8260B	25
1,2,4-Trichlorobenzene	<25	ug/kg		mmk	03/28/2001	SW 8260B	25
1,1,1-Trichloroethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,1,2-Trichloroethane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Trichloroethylene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Trichlorofluoromethane	<20	ug/kg		mmk	03/28/2001	SW 8260B	20
1,2,3-Trichloropropane	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,2,4-Trimethylbenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
1,3,5-Trimethylbenzene	<5.0	ug/kg		mmk	03/28/2001	SW 8260B	5.0
Vinyl Chloride	<15	ug/kg		mmk	03/28/2001	SW 8260B	15
Xylenes, Total	<15	ug/kg		mmk	03/28/2001	SW 8260B	15
BNA - 8270 NONAQUEOUS							
Acenaphthene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Acenaphthylene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Anthracene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Benzo(a)anthracene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Benzo(b)fluoranthene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Benzo(k)fluoranthene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Benzo(a)pyrene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Benzo(ghi)perylene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Chrysene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Dibenzo(a,h)anthracene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Fluoranthene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41

R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611059

Project ID: Beatrice FMGP #362-26

Sample ID: P-2 5' Project #362-26

Date Taken: 03/22/2001

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
Fluorene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Indeno(1,2,3-cd)pyrene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
2-Methylnaphthalene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Naphthalene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Phenanthrene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41
Pyrene	<0.41	mg/kg		ake	03/28/2001	SW 8270C	0.41

R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611060

Project ID: Beatrice FMGP #362-26

Sample ID: Trip Blank Project #362-26

Date Taken:

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
VOLATILE COMPOUNDS - 8260							
Acetone	<20	ug/L		mmk	03/31/2001	SW 8260B	20
Benzene	<0.5	ug/L		mmk	03/31/2001	SW 8260B	0.5
Bromobenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Bromochloromethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Bromodichloromethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Bromoform	<2.0	ug/L		mmk	03/31/2001	SW 8260B	2.0
Bromomethane	<4.0	ug/L		mmk	03/31/2001	SW 8260B	4.0
2-Butanone (MEK)	<10	ug/L		mmk	03/31/2001	SW 8260B	10
n-Butylbenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
sec-Butylbenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
tert-Butylbenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Carbon Tetrachloride	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Chlorobenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Chlorodibromomethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Chloroethane	<4.0	ug/L		mmk	03/31/2001	SW 8260B	4.0
Chloroform	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Chloromethane	<4.0	ug/L		mmk	03/31/2001	SW 8260B	4.0
2-Chlorotoluene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
4-Chlorotoluene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,2-Dibromo-3-Chloropropane	<10	ug/L		mmk	03/31/2001	SW 8260B	10
1,2-Dibromoethane (EDB)	<10	ug/L		mmk	03/31/2001	SW 8260B	10
Dibromomethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,2-Dichlorobenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,3-Dichlorobenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0

R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611060

Project ID: Beatrice FMGP #362-26

Sample ID: Trip Blank Project #362-26

Date Taken:

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
1,4-Dichlorobenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Dichlorodifluoromethane	<3.0	ug/L		mmk	03/31/2001	SW 8260B	3.0
1,1-Dichloroethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,2-Dichloroethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,1-Dichloroethene	<2.0	ug/L		mmk	03/31/2001	SW 8260B	2.0
cis-1,2-Dichloroethene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
trans-1,2-Dichloroethene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,2-Dichloropropane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,3-Dichloropropane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
2,2-Dichloropropane	<4.0	ug/L		mmk	03/31/2001	SW 8260B	4.0
1,1-Dichloropropene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
cis-1,3-Dichloropropene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
trans-1,3-Dichloropropene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Ethylbenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Hexachlorobutadiene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
Isopropylbenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
p-Isopropyltoluene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Methylene Chloride	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
MTBE	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Naphthalene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
n-Propylbenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Styrene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,1,1,2-Tetrachloroethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,1,2,2-Tetrachloroethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Tetrachloroethene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0

R.L. Bindert
Operations Manager

ANALYTICAL REPORT

Bruce Haley
JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508

04/04/2001

Job Number: 01.03069

Sample Number: 611060

Project ID: Beatrice FMGP #362-26

Sample ID: Trip Blank Project #362-26

Date Taken:

Date Received: 03/24/2001

Analyte	Result	Units	Result Flag	Analyst	Date Analyzed	Method	Quantitation Limit
Toluene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,2,3-Trichlorobenzene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,2,4-Trichlorobenzene	<5.0	ug/L		mmk	03/31/2001	SW 8260B	5.0
1,1,1-Trichloroethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,1,2-Trichloroethane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Trichloroethylene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Trichlorofluoromethane	<4.0	ug/L		mmk	03/31/2001	SW 8260B	4.0
1,2,3-Trichloropropane	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,2,4-Trimethylbenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
1,3,5-Trimethylbenzene	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Vinyl Chloride	<1.0	ug/L		mmk	03/31/2001	SW 8260B	1.0
Xylenes, Total	<3.0	ug/L		mmk	03/31/2001	SW 8260B	3.0

R.L. Bindert
Operations Manager

QUALITY CONTROL REPORT

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Enclosed is the Quality Control data for the following samples submitted to TestAmerica, Inc. - Cedar Falls for analysis:

Sample Number	Sample Description	Date Taken	Date Received
611058	P-2 Project #362-26	03/22/2001	03/24/2001
611059	P-2 5' Project #362-26	03/22/2001	03/24/2001
611060	Trip Blank Project #362-26		03/24/2001

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Iowa Laboratory Certification number - 7

QUALITY CONTROL REPORT

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611058 P-2 Project #362-26			03/22/2001				
ICP Metals Prep	D	mg/L	03/28/2001	2340			
Mercury,Cold Vapor	0.00036	mg/L	03/29/2001		1914	EPA 245.1	0.00020
ICP Metals - SW-6010B	Complete		03/30/2001		3068	SW 6010B	
Arsenic, ICP	1.23	mg/L	03/30/2001	2340	3448	SW 6010B	0.80
Barium, ICP	3.15	mg/L	03/30/2001	2340	3482	SW 6010B	0.10
Cadmium, ICP	<0.20	mg/L	03/30/2001	2340	3494	SW 6010B	0.20
Chromium, ICP	0.21	mg/L	03/30/2001	2340	3494	SW 6010B	0.20
Lead, ICP	<1.0	mg/L	03/30/2001	2340	3464	SW 6010B	1.0
Selenium, ICP	<1.5	mg/L	03/30/2001	2340	3442	SW 6010B	1.5
Silver, ICP	<0.20	mg/L	03/30/2001	2340	3490	SW 6010B	0.20
Prep, BNA - AQUEOUS	COMPLETE		03/26/2001	798		SW 3510	
VOLATILE COMPOUNDS - 8260							
Acetone	<100	ug/L	03/31/2001		1683	SW 8260B	100
Benzene	939	ug/L	03/31/2001		1683	SW 8260B	2
Bromobenzene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Bromochloromethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Bromodichloromethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Bromoform	<10	ug/L	03/31/2001		1683	SW 8260B	10
Bromomethane	<20	ug/L	03/31/2001		1683	SW 8260B	20
2-Butanone (MEK)	<50	ug/L	03/31/2001		1683	SW 8260B	50
n-Butylbenzene	8.9	ug/L	03/31/2001		1683	SW 8260B	5.0
sec-Butylbenzene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
tert-Butylbenzene	16.2	ug/L	03/31/2001		1683	SW 8260B	5.0
Carbon Tetrachloride	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Chlorobenzene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Chlorodibromomethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Chloroethane	<20	ug/L	03/31/2001		1683	SW 8260B	20
Chloroform	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Chloromethane	<20	ug/L	03/31/2001		1683	SW 8260B	20

QUALITY CONTROL REPORT

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611058 P-2 Project #362-26			03/22/2001				
2-Chlorotoluene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
4-Chlorotoluene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,2-Dibromo-3-Chloropropane	<50	ug/L	03/31/2001		1683	SW 8260B	50
1,2-Dibromoethane (EDB)	<50	ug/L	03/31/2001		1683	SW 8260B	50
Dibromomethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,2-Dichlorobenzene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,3-Dichlorobenzene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,4-Dichlorobenzene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Dichlorodifluoromethane	<15	ug/L	03/31/2001		1683	SW 8260B	15
1,1-Dichloroethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,2-Dichloroethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,1-Dichloroethene	<10	ug/L	03/31/2001		1683	SW 8260B	10
cis-1,2-Dichloroethene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
trans-1,2-Dichloroethene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,2-Dichloropropane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,3-Dichloropropane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
2,2-Dichloropropane	<20	ug/L	03/31/2001		1683	SW 8260B	20
1,1-Dichloropropene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
cis-1,3-Dichloropropene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
trans-1,3-Dichloropropene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Ethylbenzene	847	ug/L	03/31/2001		1683	SW 8260B	5.0
Hexachlorobutadiene	<25	ug/L	03/31/2001		1683	SW 8260B	25
Isopropylbenzene	30.8	ug/L	03/31/2001		1683	SW 8260B	5.0
p-Isopropyltoluene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Methylene Chloride	<25	ug/L	03/31/2001		1683	SW 8260B	25
MTBE	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Naphthalene	7,250	ug/L	04/02/2001		1692	SW 8260B	120
n-Propylbenzene	14.6	ug/L	03/31/2001		1683	SW 8260B	5.0
Styrene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0

QUALITY CONTROL REPORT

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611058 P-2 Project #362-26			03/22/2001				
1,1,1,2-Tetrachloroethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,1,2,2-Tetrachloroethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Tetrachloroethene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Toluene	14.9	ug/L	03/31/2001		1683	SW 8260B	5.0
1,2,3-Trichlorobenzene	<25	ug/L	03/31/2001		1683	SW 8260B	25
1,2,4-Trichlorobenzene	<25	ug/L	03/31/2001		1683	SW 8260B	25
1,1,1-Trichloroethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,1,2-Trichloroethane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Trichloroethylene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Trichlorofluoromethane	<20	ug/L	03/31/2001		1683	SW 8260B	20
1,2,3-Trichloropropane	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,2,4-Trimethylbenzene	179	ug/L	03/31/2001		1683	SW 8260B	5.0
1,3,5-Trimethylbenzene	148	ug/L	03/31/2001		1683	SW 8260B	5.0
Vinyl Chloride	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Xylenes, Total	379	ug/L	03/31/2001		1683	SW 8260B	15
Dibromofluoromethane(surr)	100.0	%	03/31/2001		1683	SW 8260B	5
Toluene-d8(surr)	97.0	%	03/31/2001		1683	SW 8260B	5
4-Bromofluorobenzene(surr)	98.0	%	03/31/2001		1683	SW 8260B	5
BNA - 8270 AQUEOUS							
Acenaphthene	1,960	ug/L	04/03/2001	798	1348	SW 8270C	1,100
Acenaphthylene	<110	ug/L	04/02/2001	798	1347	SW 8270C	110
Anthracene	551	ug/L	04/02/2001	798	1347	SW 8270C	110
Benzo(a)anthracene	249	ug/L	04/02/2001	798	1347	SW 8270C	110
Benzo(b)fluoranthene	<110	ug/L	04/02/2001	798	1347	SW 8270C	110
Benzo(k)fluoranthene	135	ug/L	04/02/2001	798	1347	SW 8270C	110
Benzo(a)pyrene	252	ug/L	04/02/2001	798	1347	SW 8270C	110
Benzo(ghi)perylene	112	ug/L	04/02/2001	798	1347	SW 8270C	110
Chrysene	224	ug/L	04/02/2001	798	1347	SW 8270C	110
Dibenzo(a,h)anthracene	<110	ug/L	04/02/2001	798	1347	SW 8270C	110

QUALITY CONTROL REPORT

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611058 P-2 Project #362-26			03/22/2001				
Fluoranthene	648	ug/L	04/02/2001	798	1347	SW 8270C	110
Fluorene	610	ug/L	04/02/2001	798	1347	SW 8270C	110
Indeno(1,2,3-cd)pyrene	<110	ug/L	04/02/2001	798	1347	SW 8270C	110
2-Methylnapthalene	2,610	ug/L	04/03/2001	798	1348	SW 8270C	1,100
Naphthalene	11,300	ug/L	04/03/2001	798	1348	SW 8270C	1,100
Phenanthrene	2,400	ug/L	04/03/2001	798	1348	SW 8270C	1,100
Pyrene	818	ug/L	04/02/2001	798	1347	SW 8270C	110
Nitrobenzene-d5 (Surr.)	98.9	%	04/02/2001	798	1347	SW 8270C	1
2-Fluorobiphenyl (Surr.)	92.2	%	04/02/2001	798	1347	SW 8270C	1
Terphenyl-d14 (Surr.)	58.4	%	04/02/2001	798	1347	SW 8270C	1
Extraction Prep	COMPLETE		03/27/2001	1639		IOWA-0A2	
EXTRACTABLE HYDROCARBONS-WATER							
Total Extractable Hydrocarbons	224,000	ug/L	03/29/2001	1639	2778	IA-OA2/S-8015	7,600
Diesel	201,000	ug/L	03/29/2001	1639	2778	IA-OA2/S-8015	7,600
Gasoline	<800	ug/L	03/28/2001	1639	2776	IA-OA2/S-8015	800
Motor Oil	22,700	ug/L	03/29/2001	1639	2778	IA-OA2/S-8015	7,600
N-Octacosane (Surr.)	783	%	03/28/2001	1639	2776	IA-OA2/S-8015	100
VOA Preservation pH	<2	units	03/30/2001		176	SW 9041A	
611059 P-2 5' Project #362-26			03/22/2001				
% Solids	77.31	%	03/28/2001		631	SM 2540 G	1
Prep, BNA - NONAQUEOUS	COMPLETE		03/26/2001	518		SW 3540	
VOLATILES 8260 NON-AQUEOUS							
Acetone	<50	ug/kg	03/28/2001		966	SW 8260B	50
Benzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Bromobenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Bromochloromethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Bromodichloromethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0

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	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611059 P-2 5' Project #362-26			03/22/2001				
Bromoform	<10	ug/kg	03/28/2001		966	SW 8260B	10
Bromomethane	<20	ug/kg	03/28/2001		966	SW 8260B	20
n-Butylbenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
sec-Butylbenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
tert-Butylbenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Carbon tetrachloride	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Chlorobenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Chlorodibromomethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Chloroethane	<20	ug/kg	03/28/2001		966	SW 8260B	20
Chloroform	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Chloromethane	<20	ug/kg	03/28/2001		966	SW 8260B	20
2-Chlorotoluene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
4-Chlorotoluene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,2-Dibromo-3-chloropropane	<50	ug/kg	03/28/2001		966	SW 8260B	50
1,2-Dibromoethane	<50	ug/kg	03/28/2001		966	SW 8260B	50
Dibromomethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,2-Dichlorobenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,3-Dichlorobenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,4-Dichlorobenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Dichlorodifluoromethane	<15	ug/kg	03/28/2001		966	SW 8260B	15
1,1-Dichloroethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,2-Dichloroethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,1-Dichloroethene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
cis-1,2-Dichloroethene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
trans-1,2-Dichloroethene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,2-Dichloropropane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,3-Dichloropropane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
2,2-Dichloropropane	<20	ug/kg	03/28/2001		966	SW 8260B	20
1,1-Dichloropropene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0

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04/04/2001

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	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611059 P-2 5' Project #362-26			03/22/2001				
cis-1,3-Dichloropropene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
trans-1,3-Dichloropropene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Ethylbenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Hexachlorobutadiene	<25	ug/kg	03/28/2001		966	SW 8260B	25
Isopropylbenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
p-Isopropyltoluene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Methylene chloride	<50	ug/kg	03/28/2001		966	SW 8260B	50
MTBE	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Naphthalene	<25	ug/kg	03/28/2001		966	SW 8260B	25
n-Propylbenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Styrene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,1,1,2-Tetrachloroethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,1,2,2-Tetrachloroethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Tetrachloroethene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Toluene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,2,3-Trichlorobenzene	<25	ug/kg	03/28/2001		966	SW 8260B	25
1,2,4-Trichlorobenzene	<25	ug/kg	03/28/2001		966	SW 8260B	25
1,1,1-Trichloroethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,1,2-Trichloroethane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Trichloroethylene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Trichlorofluoromethane	<20	ug/kg	03/28/2001		966	SW 8260B	20
1,2,3-Trichloropropane	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,2,4-Trimethylbenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
1,3,5-Trimethylbenzene	<5.0	ug/kg	03/28/2001		966	SW 8260B	5.0
Vinyl Chloride	<15	ug/kg	03/28/2001		966	SW 8260B	15
Xylenes, Total	<15	ug/kg	03/28/2001		966	SW 8260B	15
4-Bromofluorobenzene(surr)	97.9	%	03/28/2001		966	SW 8260B	1
Dibromofluoromethane(surr)	102.0	%	03/28/2001		966	SW 8260B	1
Toluene-d8(surr)	95.7	%	03/28/2001		966	SW 8260B	1

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	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611059 P-2 5' Project #362-26			03/22/2001				
BNA - 8270 NONAQUEOUS							
Acenaphthene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Acenaphthylene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Anthracene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Benzo(a)anthracene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Benzo(b)fluoranthene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Benzo(k)fluoranthene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Benzo(a)pyrene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Benzo(ghi)perylene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Chrysene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Dibenzo(a,h)anthracene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Fluoranthene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Fluorene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Indeno(1,2,3-cd)pyrene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
2-Methylnaphthalene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Naphthalene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Phenanthrene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Pyrene	<0.41	mg/kg	03/28/2001	518	933	SW 8270C	0.41
Nitrobenzene-d5 (Surr.)	64.7	%	03/28/2001	518	933	SW 8270C	1
2-Fluorobiphenyl (Surr.)	69.9	%	03/28/2001	518	933	SW 8270C	1
Terphenyl-d14 (Surr.)	88.1	%	03/28/2001	518	933	SW 8270C	1
611060 Trip Blank Project #362-26							
VOLATILE COMPOUNDS - 8260							
Acetone	<20	ug/L	03/31/2001		1683	SW 8260B	20
Benzene	<0.5	ug/L	03/31/2001		1683	SW 8260B	0.5
Bromobenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Bromochloromethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0

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	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611060 Trip Blank Project #362-26							
Bromodichloromethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Bromoform	<2.0	ug/L	03/31/2001		1683	SW 8260B	2.0
Bromomethane	<4.0	ug/L	03/31/2001		1683	SW 8260B	4.0
2-Butanone (MEK)	<10	ug/L	03/31/2001		1683	SW 8260B	10
n-Butylbenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
sec-Butylbenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
tert-Butylbenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Carbon Tetrachloride	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Chlorobenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Chlorodibromomethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Chloroethane	<4.0	ug/L	03/31/2001		1683	SW 8260B	4.0
Chloroform	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Chloromethane	<4.0	ug/L	03/31/2001		1683	SW 8260B	4.0
2-Chlorotoluene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
4-Chlorotoluene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,2-Dibromo-3-Chloropropane	<10	ug/L	03/31/2001		1683	SW 8260B	10
1,2-Dibromoethane (EDB)	<10	ug/L	03/31/2001		1683	SW 8260B	10
Dibromomethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,2-Dichlorobenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,3-Dichlorobenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,4-Dichlorobenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Dichlorodifluoromethane	<3.0	ug/L	03/31/2001		1683	SW 8260B	3.0
1,1-Dichloroethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,2-Dichloroethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,1-Dichloroethene	<2.0	ug/L	03/31/2001		1683	SW 8260B	2.0
cis-1,2-Dichloroethene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
trans-1,2-Dichloroethene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,2-Dichloropropane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,3-Dichloropropane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0

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04/04/2001

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	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611060 Trip Blank Project #362-26							
2,2-Dichloropropane	<4.0	ug/L	03/31/2001		1683	SW 8260B	4.0
1,1-Dichloropropene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
cis-1,3-Dichloropropene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
trans-1,3-Dichloropropene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Ethylbenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Hexachlorobutadiene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
Isopropylbenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
p-Isopropyltoluene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Methylene Chloride	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
MTBE	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Naphthalene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
n-Propylbenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Styrene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,1,1,2-Tetrachloroethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,1,2,2-Tetrachloroethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Tetrachloroethene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Toluene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,2,3-Trichlorobenzene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,2,4-Trichlorobenzene	<5.0	ug/L	03/31/2001		1683	SW 8260B	5.0
1,1,1-Trichloroethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,1,2-Trichloroethane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Trichloroethylene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Trichlorofluoromethane	<4.0	ug/L	03/31/2001		1683	SW 8260B	4.0
1,2,3-Trichloropropane	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,2,4-Trimethylbenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
1,3,5-Trimethylbenzene	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Vinyl Chloride	<1.0	ug/L	03/31/2001		1683	SW 8260B	1.0
Xylenes, Total	<3.0	ug/L	03/31/2001		1683	SW 8260B	3.0
Dibromofluoromethane(surr)	100.0	%	03/31/2001		1683	SW 8260B	1

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	Result	Units	Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Quantitation Limit
611060 Trip Blank Project #362-26							
Toluene-d8(surr)	96.0	%	03/31/2001		1683	SW 8260B	1
4-Bromofluorobenzene(surr)	97.0	%	03/31/2001		1683	SW 8260B	1

QUALITY CONTROL REPORT
CONTINUING CALIBRATION VERIFICATION

JACOBSON HELGOTH-LINCOLN
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Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	CCV True Concentration	Concentration Found	Percent Recovery
Mercury,Cold Vapor		1914	1.00	1.01	101.0
Mercury,Cold Vapor		1914	1.00	0.99	99.0
Mercury,Cold Vapor		1914	1.00	1.00	100.0
ICP Metals - SW-6010B		3068		Complete	
ICP Metals - SW-6010B		3068		Complete	
Arsenic, ICP		3448	5.00	4.78	95.6
Arsenic, ICP		3448	5.00	4.72	94.4
Barium, ICP		3482	5.00	4.94	98.8
Barium, ICP		3482	5.00	4.80	96.0
Cadmium, ICP		3494	5.00	5.02	100.4
Cadmium, ICP		3494	5.00	4.98	99.6
Chromium, ICP		3494	5.00	4.92	98.4
Chromium, ICP		3494	5.00	4.89	97.8
Lead, ICP		3464	5.00	4.99	99.8
Lead, ICP		3464	5.00	4.96	99.2
Selenium, ICP		3442	5.00	4.90	98.0
Selenium, ICP		3442	5.00	4.72	94.4
Silver, ICP		3490	1.00	0.99	99.0
Silver, ICP		3490	1.00	0.98	98.0
VOLATILE COMPOUNDS - 8260					
Benzene		1683	50	49	98.0
Bromoform		1683	50.0	51.2	102.4
Chlorobenzene		1683	50	49	98.0
1,1-Dichloroethane		1683	50.0	48.7	97.4
1,1-Dichloroethene		1683	50	51	102.0
1,2-Dichloropropane		1683	50.0	49.7	99.4
Ethylbenzene		1683	50	50	100.0
MTBE		1683	50.0	45.0	90.0
1,1,2,2-Tetrachloroethane		1683	50.0	48.2	96.4
Toluene		1683	50	49	98.0
Trichloroethylene		1683	50	50	100.0
1,2,4-Trimethylbenzene		1683	50	50	100.0

CCV - Continuing Calibration Verification

QUALITY CONTROL REPORT
CONTINUING CALIBRATION VERIFICATION

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04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	CCV True Concentration	Concentration Found	Percent Recovery
1,3,5-Trimethylbenzene		1683	50	50	100.0
Vinyl Chloride		1683	50.0	48.8	97.6
Xylenes, Total		1683	150	149	99.3
Dibromofluoromethane(surr)		1683	100	98.0	98.0
Toluene-d8(surr)		1683	100	98.0	98.0
4-Bromofluorobenzene(surr)		1683	100	101.0	101.0
VOLATILE COMPOUNDS - 8260					
VOLATILES 8260 NON-AQUEOUS					
Benzene		966	50.0	57.3	114.6
Bromoform		966	50.0	50.0	100.0
Chlorobenzene		966	50.0	58.2	116.4
1,1-Dichloroethane		966	50.0	46.5	93.0
1,1-Dichloroethene		966	50.0	47.2	94.4
1,2-Dichloropropane		966	50.0	50.0	100.0
Ethylbenzene		966	50.0	58.0	116.0
MTBE		966	50.0	50.6	101.2
1,1,2,2-Tetrachloroethane		966	50.0	51.7	103.4
Toluene		966	50.0	57.9	115.8
Trichloroethylene		966	50.0	53.2	106.4
1,2,4-Trimethylbenzene		966	50.0	56.0	112.0
1,3,5-Trimethylbenzene		966	50.0	56.0	112.0
Vinyl Chloride		966	50.0	44.4	88.8
Xylenes, Total		966	150	176	117.3
4-Bromofluorobenzene(surr)		966	100	100.0	100.0
Dibromofluoromethane(surr)		966	100	90.5	90.5
Toluene-d8(surr)		966	100	98.9	98.9
BNA - 8270 AQUEOUS					
Acenaphthene		1348	50	51.8	103.6
BNA - 8270 NONAQUEOUS					
Acenaphthene		933	50	50.8	101.6
Pyrene		933	50	50.0	100.0
Nitrobenzene-d5 (Surr.)		933	100	102.0	102.0

CCV - Continuing Calibration Verification

QUALITY CONTROL REPORT
CONTINUING CALIBRATION VERIFICATION

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	CCV True Concentration	Concentration Found	Percent Recovery
2-Fluorobiphenyl (Surr.)		933	100	101.0	101.0
Terphenyl-d14 (Surr.)		933	100	99.5	99.5
EXTRACTABLE HYDROCARBONS-WATER					
Diesel		2778	2,500	2,664	106.6
Motor Oil		2778	2,500	2,647	105.9

CCV - Continuing Calibration Verification

QUALITY CONTROL REPORT
BLANKS

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units
Mercury,Cold Vapor		1914	<0.00020	mg/L
Arsenic, ICP	2340	3448	<0.080	mg/L
Barium, ICP	2340	3482	<0.010	mg/L
Cadmium, ICP	2340	3494	<0.020	mg/L
Chromium, ICP	2340	3494	<0.020	mg/L
Lead, ICP	2340	3464	<0.10	mg/L
Selenium, ICP	2340	3442	<0.15	mg/L
Silver, ICP	2340	3490	<0.020	mg/L
VOLATILE COMPOUNDS - 8260				
Acetone		1683	<20	ug/L
Benzene		1683	<0.5	ug/L
Bromobenzene		1683	<1.0	ug/L
Bromochloromethane		1683	<1.0	ug/L
Bromodichloromethane		1683	<1.0	ug/L
Bromoform		1683	<2.0	ug/L
Bromomethane		1683	<4.0	ug/L
2-Butanone (MEK)		1683	<10	ug/L
n-Butylbenzene		1683	<1.0	ug/L
sec-Butylbenzene		1683	<1.0	ug/L
tert-Butylbenzene		1683	<1.0	ug/L
Carbon Tetrachloride		1683	<1.0	ug/L
Chlorobenzene		1683	<1.0	ug/L
Chlorodibromomethane		1683	<1.0	ug/L

Advisory Control Limits for Blanks:
Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.
GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.
Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
BLANKS

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units
Chloroethane		1683	<4.0	ug/L
Chloroform		1683	<1.0	ug/L
Chloromethane		1683	<4.0	ug/L
2-Chlorotoluene		1683	<1.0	ug/L
4-Chlorotoluene		1683	<1.0	ug/L
1,2-Dibromo-3-Chloropropane		1683	<10	ug/L
1,2-Dibromoethane (EDB)		1683	<10	ug/L
Dibromomethane		1683	<1.0	ug/L
1,2-Dichlorobenzene		1683	<1.0	ug/L
1,3-Dichlorobenzene		1683	<1.0	ug/L
1,4-Dichlorobenzene		1683	<1.0	ug/L
Dichlorodifluoromethane		1683	<3.0	ug/L
1,1-Dichloroethane		1683	<1.0	ug/L
1,2-Dichloroethane		1683	<1.0	ug/L
1,1-Dichloroethene		1683	<2.0	ug/L
cis-1,2-Dichloroethene		1683	<1.0	ug/L
trans-1,2-Dichloroethene		1683	<1.0	ug/L
1,2-Dichloropropane		1683	<1.0	ug/L
1,3-Dichloropropane		1683	<1.0	ug/L
2,2-Dichloropropane		1683	<4.0	ug/L
1,1-Dichloropropene		1683	<1.0	ug/L
cis-1,3-Dichloropropene		1683	<1.0	ug/L
trans-1,3-Dichloropropene		1683	<1.0	ug/L

Advisory Control Limits for Blanks:
Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.
GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.
Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
BLANKS

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units
Ethylbenzene		1683	<1.0	ug/L
Hexachlorobutadiene		1683	<5.0	ug/L
Isopropylbenzene		1683	<1.0	ug/L
p-Isopropyltoluene		1683	<1.0	ug/L
Methylene Chloride		1683	<5.0	ug/L
MTBE		1683	<1.0	ug/L
Naphthalene		1683	<5.0	ug/L
n-Propylbenzene		1683	<1.0	ug/L
Styrene		1683	<1.0	ug/L
1,1,1,2-Tetrachloroethane		1683	<1.0	ug/L
1,1,2,2-Tetrachloroethane		1683	<1.0	ug/L
Tetrachloroethene		1683	<1.0	ug/L
Toluene		1683	<1.0	ug/L
1,2,3-Trichlorobenzene		1683	<5.0	ug/L
1,2,4-Trichlorobenzene		1683	<5.0	ug/L
1,1,1-Trichloroethane		1683	<1.0	ug/L
1,1,2-Trichloroethane		1683	<1.0	ug/L
Trichloroethylene		1683	<1.0	ug/L
Trichlorofluoromethane		1683	<4.0	ug/L
1,2,3-Trichloropropane		1683	<1.0	ug/L
1,2,4-Trimethylbenzene		1683	<1.0	ug/L
1,3,5-Trimethylbenzene		1683	<1.0	ug/L
Vinyl Chloride		1683	<1.0	ug/L

Advisory Control Limits for Blanks:

Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.

GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.

Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
BLANKS

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units
Xylenes, Total		1683	<3.0	ug/L
VOLATILE COMPOUNDS - 8260				
Naphthalene		1692	<5.0	ug/L
VOLATILES 8260 NON-AQUEOUS				
Acetone		966	<50	ug/kg
Benzene		966	<5.0	ug/kg
Bromobenzene		966	<5.0	ug/kg
Bromochloromethane		966	<5.0	ug/kg
Bromodichloromethane		966	<5.0	ug/kg
Bromoform		966	<10	ug/kg
Bromomethane		966	<20	ug/kg
n-Butylbenzene		966	<5.0	ug/kg
sec-Butylbenzene		966	<5.0	ug/kg
tert-Butylbenzene		966	<5.0	ug/kg
Carbon tetrachloride		966	<5.0	ug/kg
Chlorobenzene		966	<5.0	ug/kg
Chlorodibromomethane		966	<5.0	ug/kg
Chloroethane		966	<20	ug/kg
Chloroform		966	<5.0	ug/kg
Chloromethane		966	<20	ug/kg
2-Chlorotoluene		966	<5.0	ug/kg
4-Chlorotoluene		966	<5.0	ug/kg
1,2-Dibromo-3-chloropropane		966	<50	ug/kg

Advisory Control Limits for Blanks:
Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.
GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.
Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
BLANKS

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units
1,2-Dibromoethane		966	<50	ug/kg
Dibromomethane		966	<5.0	ug/kg
1,2-Dichlorobenzene		966	<5.0	ug/kg
1,3-Dichlorobenzene		966	<5.0	ug/kg
1,4-Dichlorobenzene		966	<5.0	ug/kg
Dichlorodifluoromethane		966	<15	ug/kg
1,1-Dichloroethane		966	<5.0	ug/kg
1,2-Dichloroethane		966	<5.0	ug/kg
1,1-Dichloroethene		966	<5.0	ug/kg
cis-1,2-Dichloroethene		966	<5.0	ug/kg
trans-1,2-Dichloroethene		966	<5.0	ug/kg
1,2-Dichloropropane		966	<5.0	ug/kg
1,3-Dichloropropane		966	<5.0	ug/kg
2,2-Dichloropropane		966	<20	ug/kg
1,1-Dichloropropene		966	<5.0	ug/kg
cis-1,3-Dichloropropene		966	<5.0	ug/kg
trans-1,3-Dichloropropene		966	<5.0	ug/kg
Ethylbenzene		966	<5.0	ug/kg
Hexachlorobutadiene		966	<25	ug/kg
Isopropylbenzene		966	<5.0	ug/kg
p-Isopropyltoluene		966	<5.0	ug/kg
Methylene chloride		966	<50	ug/kg
MTBE		966	<5.0	ug/kg

Advisory Control Limits for Blanks:
Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.
GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.
Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
BLANKS

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units
Naphthalene		966	<25	ug/kg
n-Propylbenzene		966	<5.0	ug/kg
Styrene		966	<5.0	ug/kg
1,1,1,2-Tetrachloroethane		966	<5.0	ug/kg
1,1,2,2-Tetrachloroethane		966	<5.0	ug/kg
Tetrachloroethene		966	<5.0	ug/kg
Toluene		966	<5.0	ug/kg
1,2,3-Trichlorobenzene		966	<25	ug/kg
1,2,4-Trichlorobenzene		966	<25	ug/kg
1,1,1-Trichloroethane		966	<5.0	ug/kg
1,1,2-Trichloroethane		966	<5.0	ug/kg
Trichloroethylene		966	<5.0	ug/kg
Trichlorofluoromethane		966	<20	ug/kg
1,2,3-Trichloropropane		966	<5.0	ug/kg
1,2,4-Trimethylbenzene		966	<5.0	ug/kg
1,3,5-Trimethylbenzene		966	<5.0	ug/kg
Vinyl Chloride		966	<15	ug/kg
Xylenes, Total		966	<15	ug/kg
BNA - 8270 AQUEOUS				
Acenaphthene	798	1342	<10	ug/L
Acenaphthylene	798	1342	<10	ug/L
Anthracene	798	1342	<10	ug/L
Benzo(a)anthracene	798	1342	<10	ug/L

Advisory Control Limits for Blanks:
Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.
GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.
Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
BLANKS

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units
Benzo(b)fluoranthene	798	1342	<10	ug/L
Benzo(k)fluoranthene	798	1342	<10	ug/L
Benzo(a)pyrene	798	1342	<10	ug/L
Benzo(ghi)perylene	798	1342	<10	ug/L
Chrysene	798	1342	<10	ug/L
Dibenzo(a,h)anthracene	798	1342	<10	ug/L
Fluoranthene	798	1342	<10	ug/L
Fluorene	798	1342	<10	ug/L
Indeno(1,2,3-cd)pyrene	798	1342	<10	ug/L
2-Methylnapthalene	798	1342	<10	ug/L
Naphthalene	798	1342	<10	ug/L
Phenanthrene	798	1342	<10	ug/L
Pyrene	798	1342	<10	ug/L
BNA - 8270 NONAQUEOUS				
Acenaphthene	518	931	<0.33	mg/kg
Acenaphthylene	518	931	<0.33	mg/kg
Anthracene	518	931	<0.33	mg/kg
Benzo(a)anthracene	518	931	<0.33	mg/kg
Benzo(b)fluoranthene	518	931	<0.33	mg/kg
Benzo(k)fluoranthene	518	931	<0.33	mg/kg
Benzo(a)pyrene	518	931	<0.33	mg/kg
Benzo(ghi)perylene	518	931	<0.33	mg/kg
Chrysene	518	931	<0.33	mg/kg

Advisory Control Limits for Blanks:
Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.
GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.
Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
BLANKS

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units
Dibenzo(a,h)anthracene	518	931	<0.33	mg/kg
Fluoranthene	518	931	<0.33	mg/kg
Fluorene	518	931	<0.33	mg/kg
Indeno(1,2,3-cd)pyrene	518	931	<0.33	mg/kg
2-Methylnaphthalene	518	931	<0.33	mg/kg
Naphthalene	518	931	<0.33	mg/kg
Phenanthrene	518	931	<0.33	mg/kg
Pyrene	518	931	<0.33	mg/kg
EXTRACTABLE HYDROCARBONS-WATER				
Total Extractable Hydrocarbons	1639	2775	<380	ug/L
Diesel	1639	2775	<380	ug/L
Motor Oil	1639	2775	<380	ug/L

Advisory Control Limits for Blanks:
Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.
GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.
Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
MATRIX SPIKE/MATRIX SPIKE DUPLICATE

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Matrix Spike Result	Sample Result	Spike Amount	Units	Percent Recovery	MSD Result	MSD Spike Amount	Units	Percent Recovery	MS/MSD RPD
Mercury,Cold Vapor		1914	0.00176	<0.0002	0.0016	mg/L	105.4	0.0017	0.0016	mg/L	101.8	3.5
Mercury,Cold Vapor		1914	0.00172	<0.0002	0.0016	mg/L	103.0	0.0016	0.0016	mg/L	98.8	4.2
ICP Metals - SW-6010B		3068		Complet								
ICP Metals - SW-6010B		3068		Complet								
Arsenic, ICP	2340	3448	2.08	<0.080	2.00	mg/L	104.0	2.05	2.00	mg/L	102.5	1.5
Barium, ICP	2340	3482	1.03	0.021	1.00	mg/L	100.9	1.00	1.00	mg/L	97.9	3.0
Cadmium, ICP	2340	3494	1.02	<0.020	1.00	mg/L	102.0	1.00	1.00	mg/L	100.0	2.0
Chromium, ICP	2340	3494	1.01	<0.020	1.00	mg/L	101.0	0.99	1.00	mg/L	99.0	2.0
Lead, ICP	2340	3464	2.08	<0.10	2.00	mg/L	104.0	1.99	2.00	mg/L	99.5	4.4
Selenium, ICP	2340	3442	4.08	<0.15	4.00	mg/L	102.0	3.93	4.00	mg/L	98.3	3.7
Silver, ICP	2340	3490	0.95	<0.040	1.00	mg/L	95.0		1.00	mg/L		
BNA - 8270 NONAQUEOUS												
Acenaphthene	518	931	6.18	<0.34	6.61	mg/kg	93.5	6.48	6.47	mg/kg	100.2	4.7
Pyrene	518	931	6.79	<0.34	6.61	mg/kg	102.7	6.74	6.47	mg/kg	104.2	0.7

NOTE: Matrix Spike Samples may not be samples from this job.

Advisory Control Limits for MS/MSDs
Inorganic Parameters and GC Volatiles
The spike recovery should be 75 - 125% if the spike added value was greater than or equal to one fourth of the sample result value. If not, the control limits are not established. The RPD for the MS/MSD pair should be less than 20.

RPD = Relative Percent Difference

QUALITY CONTROL REPORT
DUPLICATES

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	Original Analysis	Duplicate Analysis	Units	RPD
% Solids		631	77.31	77.32	%	0.0

NOTE: Spikes and Duplicates may not be samples from this job.

RPD - Relative Percent Difference

Advisory Control Limits for Duplicates - RPD should be less than 20.

QUALITY CONTROL REPORT
LABORATORY CONTROL STANDARD

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	LCS True Concentration	LCS % Recovery
Mercury,Cold Vapor		1914	0.00167	105.4
Arsenic, ICP	2340	3448	2.00	100.0
Barium, ICP	2340	3482	1.00	99.0
Cadmium, ICP	2340	3494	1.00	101.0
Chromium, ICP	2340	3494	1.00	100.0
Lead, ICP	2340	3464	2.00	102.5
Selenium, ICP	2340	3442	4.00	100.5
Silver, ICP	2340	3490	1.00	100.0
VOLATILE COMPOUNDS - 8260				
Benzene		1683	20	110.0
Chlorobenzene		1683	20	110.0
1,1-Dichloroethene		1683	20	110.0
Ethylbenzene		1683	20	110.0
MTBE		1683	20	115.0
Toluene		1683	20	110.0
1,2,3-Trichlorobenzene		1683	20.0	109.0
1,2,4-Trichlorobenzene		1683	20	110.0
Trichloroethylene		1683	20	110.0
1,2,4-Trimethylbenzene		1683	20	110.0
1,3,5-Trimethylbenzene		1683	20	110.0
Xylenes, Total		1683	60	108.3
VOLATILE COMPOUNDS - 8260				
VOLATILES 8260 NON-AQUEOUS				
Benzene		966	25.2	134.9

LCS - Laboratory Control Standard

Advisory Control Limits - Inorganics - LCS recovery should be 80 - 120%.

QUALITY CONTROL REPORT
LABORATORY CONTROL STANDARD

JACOBSON HELGOTH-LINCOLN
1033 "O" Street
Suite 546
Lincoln, NE 68508
Bruce Haley

04/04/2001

Job Number: 01.03069

Analyte	Prep Batch Number	Run Batch Number	LCS True Concentration	LCS % Recovery
Chlorobenzene		966	25.2	133.3
1,1-Dichloroethene		966	25.2	111.9
Ethylbenzene		966	25.2	134.5
MTBE		966	25.2	117.1
Toluene		966	25.2	132.1
1,2,4-Trichlorobenzene		966	25.2	145.6
Trichloroethylene		966	25.2	122.6
1,2,4-Trimethylbenzene		966	25.2	131.0
1,3,5-Trimethylbenzene		966	25.2	132.1
Xylenes, Total		966	75.6	136.2
BNA - 8270 NONAQUEOUS				
Acenaphthene	518	931	6.54	94.6
Pyrene	518	931	6.54	103.5
EXTRACTABLE HYDROCARBONS-WATER				
Diesel	1639	2775	2,000	98.4

LCS - Laboratory Control Standard

Advisory Control Limits - Inorganics - LCS recovery should be 80 - 120%.

FE

COOLER TEMPERATURES

CLIENT: Jacobsen Helgoth

CITY: _____ PROJECT: Beatrice FM GP

DATE TAKEN: 3-24-01 TAKEN BY: CH

Cooler #1: 0.3 °C / ON ICE Cooler #3: _____ ° C / ON ICE

Cooler #2: _____ ° C / ON ICE Cooler #4: _____ ° C / ON ICE

Increased emphasis has been put on sample preservation by the various regulators. Any sample being sent to NET must be properly preserved, this includes sending samples in a properly cooled shipping container. The majority of tests performed for regulatory compliance must be preserved at 4° C ± 2° C during storage and shipment as directed by 40 CFR Part 136. Results from samples which are not properly preserved at 4 °C ± 2 ° C may be rejected by regulators. Rejection or acceptance is solely at the discretion of the regulators.

Chain of Custody

Project No.	Project Name:	Report To:
362-26	Beatrice FMGP	Jacobson Helgoth CONSULTANTS
Sampler (Signature) Bruce Haley	(Print) Bruce Haley	Jacobson Helgoth Consultants 10838 Old Mill Road, Suite One Omaha, Nebraska 68154-2649

Sample Identification Number	01 Date	Time	Water	Soil	Other	Sampling Location (Optional)	No. of Containers	VOC	PAH	OA-2	Total Metals	5035				Remarks: (Include: full list of analytes, field filtering and changes to plan)
P-2	3-22	14:40	X				5	2	1	1	1					
P-2 5'	3-22	14:20		X			4		1			3				

Page __ of __

Invoice To:

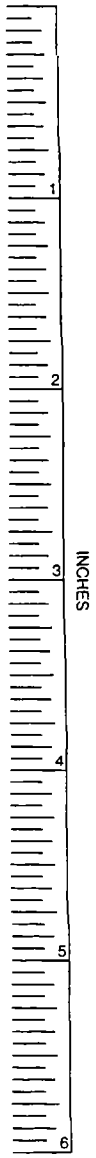
Copy To:

Per Bruce H. needs RCRA metals & PAH
8270 3-26-01

Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Bruce Haley	3-23-01 10:30	Melissa Faccidni	3/24/01 10:25				
(Print) Bruce Haley	Company JHC	(Print) Melissa Faccidni	Company TA	(Print)	Company	(Print)	Company
Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
(Print)	Company	(Print)	Company	(Print)	Company	(Print)	Company

ETQF 4.21-1

White - Laboratory Copy Yellow - Transporter Copy Pink - Sampler Copy



"Rite in the Rain®"
ALL-WEATHER WRITING PAPER

Name _____

_____

Address _____

_____

Phone _____

Project _____

_____

_____

_____

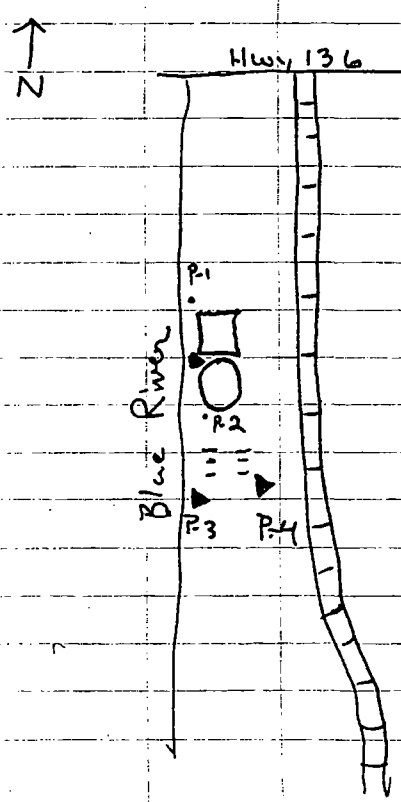
Yellow Polyethylene Protective Slipcovers (Item #31) are available for this style of notebook. Helps protect your notebook from wear & tear. Contact your dealer or the J. L. Darling Corporation.

CONTENTS

PAGE	REFERENCE	DATE
	Beatrice - NDEQ	

Beatrice FMGP JHC-362-26 3-22-01

P-1 TD-22' probe refusal
SWL 21.5
3-7 5' ND
7-11 10' ND
Wtr sheen, strong odor - ND for BTEX



most of the results are within the diesel

Bruce Haley

Beatrice FMGP JHC-362-26 3-22-01

P-2 TD-21'
SWL - 15.1'
3-7' 5' - ND
7-11' 10' - ND
Wtr. High sheen
Strong odor (diesel) potential
Free product -
collect OA-2 1l amber No Treat
PAH 1l amber No Treat
8 RCRA Metals 100ml plastic HNO_3
VOC 2-40ml VOA

P-3 TD-22.3' auger ~~refusal~~ refusal
SWL - 16.8'
3-7' 5' - ND
7-11' 10' - ND
Wtr. very strong odor - dark red, thick, will not run this through on-site GC.

P-4 TD 21 auger refusal
SWL: Dry no sample
3-7' 5' - ND
7-11' 10' - ND

Bruce Haley

Beatrice FMGP JHC-362-26 3-22-01

Soils ranged from dark silty clays to a light colored loam.
the soils are dry- no green color no odor.
The water appears to be on top of the hard pack confining layer, the depth of prope refusal.

Don "Peoples Natural Gas" said that in the 80's this site was investigated and that drums of waste were hauled away.
He does not remember the who the contractor was or who has the report. The NDEQ may want ~~to~~ to check with the City of Beatrice, Minnigasco or Peoples Natural Gas. to see who has the report.

16:30 Leave Site

ACCESS AGREEMENT

The Nebraska Department of Environmental Quality (NDEQ), through a Cooperative Agreement with the United States Environmental Protection Agency (USEPA), will conduct environmental sampling on and near the following site being evaluated:

Evaluated Site/Facility: Former Manufactured Gas Plant in Beatrice, Nebraska
[Approximate legal description (i.e., Section, Township, and Range) or address]

NDEQ Site Coordinator: Wade Gregson or Bob Zimmerman at 402-471-3388
[Field/site coordinator's name and phone number]

NDEQ and its contractors will perform certain activities that may include sub-surface soil, soil-gas and/or groundwater sampling (including sampling private/municipal wells) on or in the vicinity of the site/facility being evaluated. The undersigned owner/operator/agent agrees to allow NDEQ or contractors to have access to the following property in order to perform sampling activities. Sampling activities will include sampling monitoring wells on/near the site. The property owner will not be held liable for any property damage resulting from activities performed as part of the environmental sampling field work/activities.

Property: City property located directly south of the intersection of Market and First Streets
(Address/description/approximate legal description where access is needed)

Date/Time: To be arranged, as soon as possible, between Contractor and City representatives.
(Indicate the week(s) that the access requirements/activities are anticipated to occur)

Property Owner / Agent — Date: 2-19-2001

Remediation Section Supervisor, NDEQ — Date: 2/23/01

Send To: Nebraska Department of Environmental Quality
Remediation Section, Waste Management Division
1200 N Street (Suite 400), The Atrium Building
Lincoln, NE 68509 – 8922

#1

VIEW OF P-S LOCATED NEAR THE NORTH SIDE OF A FORMER BUILDING PAD

#2

VIEW NORTH ACROSS SITE SHOWING CONTAINMENT VESSEL CONCRETE PAD

#3

VIEW NORTH ACROSS THE SITE, PROBE SETUP AT P-2

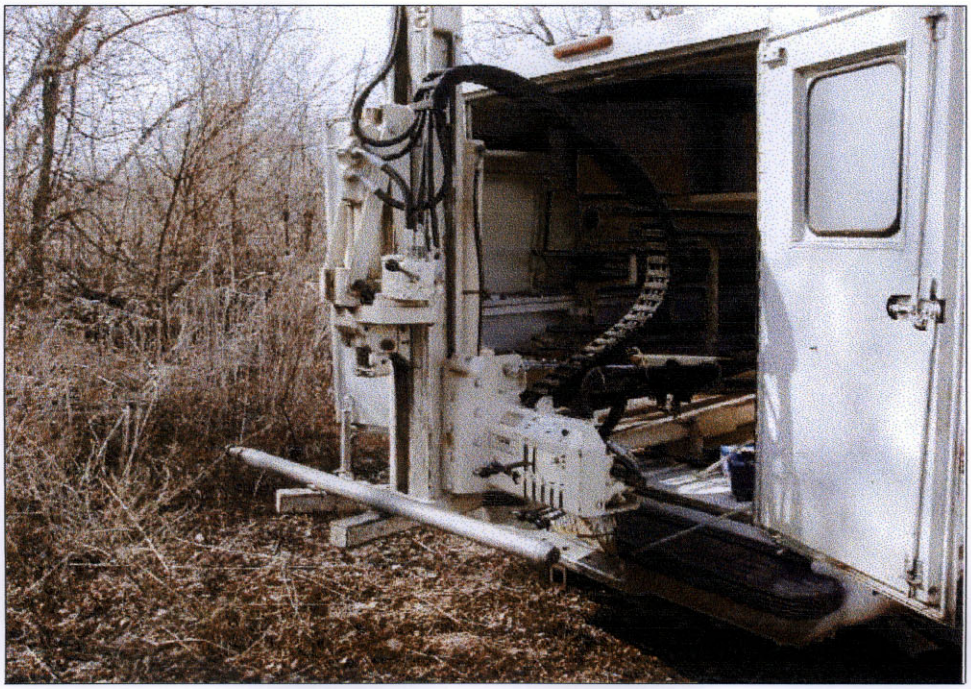
#4

VIEW WEST OF P-3 SETUP NEAR EXISTING MONITORING WELL

#5

VIEW OF RECOVERED FREE PRODUCT FROM P-3

#6



VIEW OF SOIL SAMPLER

#7

VIEW EAST ACROSS THE RAILROAD TRACKS SHOWING COMMERCAIL BUSINESSES

#8

VIEW SOUTHEAST SHOWING PROBE LOCATION P-4

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = CompName Like "*CITY OF BEATRICE*"

22 stations met your criteria.

Registration / Status/Replace / Permit Number	Use	NRD Name / County Name / Well Location / Footage	Completion Date / Filing Date / Last Update / Abandoned Date	Acres Irrig / Gallons/Min / Static Level / Pumping Level	Pump Col Di / Pump Depth / Well Depth
G-026753	Q	Lower Big Blue	3/24/1967	----	8 in
A/0		Gage	3/31/1967	509 gpm	----
		4N 5E 2 AB	---	38 ft	116 ft
	Logs	290S 2590W	---	73 ft	
G-026752	Q	Lower Big Blue	3/20/1967	----	8 in
A/0		Gage	3/31/1967	800 gpm	----
		4N 5E 2 BA	---	30 ft	116 ft
	Logs	90S 1700E	---	38 ft	
G-072859	P	Lower Big Blue	6/8/1990	----	10 in
A/0		Gage	7/25/1990	1500 gpm	----
		4N 5E 2 BB	10/22/1997	14 ft	187 ft
Other Info	Logs	686S 886E	---	39 ft	
G-072860	P	Lower Big Blue	6/8/1990	----	10 in
A/0		Gage	7/25/1990	1500 gpm	----
		4N 5E 2 BD	10/22/1997	14 ft	197 ft
Other Info	Logs	1403S 1667E	---	38 ft	
G-027653	P	Lower Big Blue	8/6/1965	----	8 in
A/0		Gage	8/2/1967	1000 gpm	----
		4N 5E 3 CB	---	21 ft	100 ft
	Logs	1660N 704E	---	39 ft	

Registration / Status/Replace / Permit Number	Use	NRD Name / County Name / Well Location / Footage	Completion Date / Filing Date / Last Update / Abandoned Date	Acres Irrig / Gallons/Min / Static Level / Pumping Level	Pump Col Di / Pump Depth / Well Depth
G-027654	P	Lower Big Blue	8/21/1965	----	8 in
A/0		Gage	8/2/1967	1000 gpm	----
		4N 5E 3 CC	---	22 ft	99 ft
	Logs	1303N 768E	---	39 ft	
A-010481A	P	Lower Big Blue	8/20/1930	----	10 in
A/0		Gage	12/27/1976	1400 gpm	----

		4N 5E 10 AC	9/12/1997	28 ft	95 ft
Other Info	Logs		---	44 ft	
A-010481B	P	Lower Big Blue	3/24/1931	----	7 in
A/0		Gage	12/27/1976	1500 gpm	----
		4N 5E 10 AC	9/12/1997	24 ft	95 ft
Other Info	Logs		---	42 ft	
A-010481C	P	Lower Big Blue	4/28/1931	----	7 in
A/0		Gage	12/27/1976	1300 gpm	----
		4N 5E 10 AC	9/12/1997	24 ft	93 ft
Other Info	Logs		---	44 ft	
G-027816	P	Lower Big Blue	8/10/1967	----	8 in
A/0		Gage	8/17/1967	1000 gpm	----
		4N 5E 10 AC	---	20 ft	93 ft
	Logs	2601S 1322W	---	46 ft	

Registration Status/Replace Permit Number	**Use**	**NRD Name County Name Well Location Footage**	**Completion Date Filing Date Last Update Abandoned Date**	**Acres Irrig Gallons/Min Static Level Pumping Level**	**Pump Col Di Pump Depth Well Depth**
A-010481D	P	Lower Big Blue	4/22/1931	----	7 in
A/0		Gage	12/27/1976	1000 gpm	----
		4N 5E 10 AC	9/12/1997	29 ft	96 ft
Other Info	Logs		---	54 ft	
G-027655	P	Lower Big Blue	9/15/1965	----	8 in
A/0		Gage	8/2/1967	1000 gpm	----
		4N 5E 10 BA	---	18 ft	97 ft
	Logs	109S 1936E	---	32 ft	
G-086260	G	Lower Big Blue	11/3/1995	----	----
A/0		Gage	12/13/1995	----	----
		4N 6E 16 DD	---	43 ft	150 ft
Other Info	Logs	100N 970W	---	----	
G-079589	Q	Lower Big Blue	9/22/1993	----	----
A/0		Gage	11/24/1993	----	----
		4N 6E 33 DD	---	13 ft	16 ft
Other Info	Logs	470N 1965W	---	----	
G-079588	Q	Lower Big Blue	9/22/1993	----	----
A/0		Gage	11/24/1993	----	----
		4N 6E 33 DD	---	12 ft	18 ft
Other Info	Logs	430N 2200W	---	----	

Registration Status/Replace Permit Number	**Use**	**NRD Name County Name Well Location Footage**	**Completion Date Filing Date Last Update Abandoned Date**	**Acres Irrig Gallons/Min Static Level Pumping Level**	**Pump Col Di Pump Depth Well Depth**
G-079587	Q	Lower Big Blue	9/22/1993	----	----
A/0		Gage	11/24/1993	----	----
		4N 6E 33 DD	---	10 ft	14 ft
Other Info	Logs	570N 2205W	---	----	
G-079584	Q	Lower Big Blue	9/7/1993	----	----
A/0		Gage	11/24/1993	----	----
		4N 6E 33 DD	---	10 ft	14 ft
Other Info	Logs	420N 2040W	---	----	
G-079583	Q	Lower Big Blue	9/7/1993	----	----

A/0		Gage	11/24/1993	----	----
		4N 6E 33 DD	---	10 ft	14 ft
Other Info	Logs	530N 2095W	---	----	
G-079582	Q	Lower Big Blue	9/8/1993	----	----
A/0		Gage	11/24/1993	----	----
		4N 6E 33 DD	---	12 ft	14 ft
Other Info	Logs	500N 2065W	---	----	
G-079585	Q	Lower Big Blue	9/8/1993	----	----
A/0		Gage	11/24/1993	----	----
		4N 6E 33 DD	---	13 ft	14 ft
Other Info	Logs	465N 2120W	---	----	

Registration Status/Replace Permit Number	**Use**	**NRD Name County Name Well Location Footage**	**Completion Date Filing Date Last Update Abandoned Date**	**Acres Irrig Gallons/Min Static Level Pumping Level**	**Pump Col Di Pump Depth Well Depth**
G-079590	Q	Lower Big Blue	9/22/1993	----	----
A/0		Gage	11/24/1993	----	----
		4N 6E 33 DD	---	12 ft	14 ft
Other Info	Logs	550N 2005W	---	----	
G-079586	Q	Lower Big Blue	9/8/1993	----	----
A/0		Gage	11/24/1993	----	----
		4N 6E 33 DD	---	10 ft	14 ft
Other Info	Logs	540N 2135W	---	----	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 4) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 31)

1 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-096501	D	Lower Big Blue	6/5/1997	----	4 in
A/0		Gage	6/11/1998	20 gpm	2.5 ft
		4N 6E 31 CC	6/16/1998	60 ft	103 ft
Other Info Logs		495N 1155E	---	90 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 4) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 26)

2 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-107268	D	Lower Big Blue	9/4/2000	----	1 in
A/0		Gage	10/5/2000	10 gpm	80 ft
		4N 6E 26 AC	11/7/2000	60 ft	92 ft
Other Info Logs		1900S 2300W	---	70 ft	
G-100549	D	Lower Big Blue	4/30/1999	----	1 in
A/0		Gage	5/7/1999	10 gpm	50 ft
		4N 6E 26 AC	10/19/1999	38 ft	62 ft
Other Info Logs		2390S 1370W	---	50 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 4) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 27)

3 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-106326	D	Lower Big Blue	6/9/2000	----	5 in
A/0		Gage	7/11/2000	15 gpm	80 ft
		4N 6E 27 AA	7/13/2000	62 ft	99 ft
Other Info Logs		150S 150W	---	85 ft	
G-100937	D	Lower Big Blue	6/12/1999	----	----
I/0		Gage	6/17/1999	----	----
		4N 6E 27 AA	11/1/1999	66 ft	102 ft
Other Info Logs		1040S 578W	---	80 ft	
G-091059A	Q	Lower Big Blue	5/14/1993	----	----
A/0		Gage	4/7/1997	----	----
		4N 6E 27 CB	5/28/1997	10 ft	18 ft
Other Info Logs		1830N 52E	---	----	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 4) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 30)

1 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-089934	D	Lower Big Blue	11/2/1996	----	----
I/0		Gage	12/2/1996	----	----
		4N 6E 30 DC	5/9/1997	43 ft	80 ft
Other Info Logs		55N 1800W	---	80 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 4) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 22)

1 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-105044	D	Lower Big Blue	12/14/1999	----	4 in
A/0		Gage	4/11/2000	15 gpm	45 ft
		4N 6E 22 DC	4/26/2000	27 ft	52 ft
Other Info Logs		300N 2580W	---	45 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 4) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 24)

1 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-086123	D	Lower Big Blue	7/26/1995	----	5 in
I/0		Gage	11/29/1995	10 gpm	32 ft
		4N 6E 24 DC	---	10 ft	44 ft
Other Info Logs		140N 1980W	---	30 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 4) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 16)

2 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-085284	U	Lower Big Blue	6/29/1995	----	----
I/0		Gage	8/3/1995	----	----
		4N 6E 16 DA	---	58 ft	106 ft
Other Info Logs		2360N 950W	---	80 ft	
G-086260	G	Lower Big Blue	11/3/1995	----	----
A/0		Gage	12/13/1995	----	----
		4N 6E 16 DD	---	43 ft	150 ft
Other Info Logs		100N 970W	---	----	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 3) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 8)

1 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-087948	D	Lower Big Blue	5/6/1996	----	4 in
A/0		Gage	5/14/1996	15 gpm	150 ft
		3N 6E 8 DA	---	45 ft	122 ft
Other Info Logs		2300N 450W	---	80 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 3) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 15)

2 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-086648	D	Lower Big Blue	2/25/1995	----	6 in
A/0		Gage	1/8/1996	20 gpm	62 ft
		3N 6E 15 CB	---	28 ft	82 ft
Other Info Logs		2200N 200E	---	70 ft	
G-085640	D	Lower Big Blue	8/16/1995	----	----
I/0		Gage	9/21/1995	25 gpm	----
		3N 6E 15 CD	---	44 ft	90 ft
Other Info Logs		785N 2519E	---	60 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 3) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 16)

3 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-079902	D	Lower Big Blue	11/12/1993	----	----
A/0		Gage	1/5/1994	----	----
		3N 6E 16 AD	---	78 ft	123 ft
Other Info Logs		1500S 200W	---	100 ft	
G-095594	D	Lower Big Blue	9/28/1996	----	5 in
A/0		Gage	4/15/1998	12 gpm	65 ft
		3N 6E 16 BB	4/16/1998	39 ft	69 ft
Other Info Logs		60S 100E	---	60 ft	
G-102499	D	Lower Big Blue	3/4/1999	----	1 in
A/0		Gage	11/3/1999	20 gpm	65 ft
		3N 6E 16 CC	5/12/2000	24 ft	93 ft
Other Info Logs		90N 1250E	---	80 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 3) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 17)

1 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-097748	D	Lower Big Blue	8/21/1998	----	----
I/0		Gage	9/10/1998	----	----
		3N 6E 17 AD	9/14/1998	27 ft	60 ft
Other Info Logs		1600S 500W	---	50 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 3) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 18)

1 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-086512	D	Lower Big Blue	12/16/1995	----	----
I/0		Gage	12/28/1995	----	----
		3N 6E 18 BB	---	60 ft	106 ft
Other Info Logs		267S 135E	---	90 ft	

Click here to go back to Wells page.

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 3) AND (RangeNum = 6)) AND (RangeLet Like "e")) AND (Section = 20)

1 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-091746	D	Lower Big Blue	7/31/1996	----	1 in
A/0		Gage	6/18/1997	10 gpm	130 ft
		3N 6E 20 DC	6/19/1997	45 ft	149 ft
Other Info Logs		150N 1720W	---	120 ft	

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REGISTERED GROUNDWATER WELLS DATA RETRIEVAL

Legend and Notes

Criteria = (((Township = 3) AND (RangeNum = 5)) AND (RangeLet Like "e")) AND (Section = 1)

1 stations met your criteria.

Registration Status/Replace Permit Number	Use	NRD Name County Name Well Location Footage	Completion Date Filing Date Last Update Abandoned Date	Acres Irrig Gallons/Min Static Level Pumping Level	Pump Col Di Pump Depth Well Depth
G-106970	D	Lower Big Blue	8/4/2000	----	----
I/0		Gage	9/6/2000	20 gpm	----
		3N 5E 1 DD	9/19/2000	35 ft	86 ft
Other Info Logs		198N 759W	---	45 ft	

Click here to go back to Wells page.

BEATRICE PUBLIC LIBRARY

100 North 16th Street Beatrice, Nebraska 68310 Phone (402) 223-3584

FAX - 402-223-3913

FACSIMILE TRANSMISSION SHEET

TO: Bruce Hayley

ORGANIZATION: Jacobson-Helgoth

FROM: Laureen Riedesel
lriedesel @ beatrice.lib.ne.us

DATE: 12/15/00

Don't hesitate to get in touch if I can be of additional help.

NO. OF PAGES (INCLUDING COVER SHEET): 2

IF THERE ARE ANY PROBLEMS WITH RECEIVING THE TRANSMISSION, PLEASE CALL (402) 223-3584.

Here is what I've found:

No mention of anything electrical in 1886-87 Directory

1888 - Beatrice Electric Light Co. - NW Corner - Front + Elk Sts.

1890 - Beatrice Electric Light Co. - 1st St between Elk + Ella

1896 - Beatrice Light + Power Co. (no plant address given)

1898 - Beatrice Electric Co. - plant 301 N. 1st St.
(same as Front + Elk St. location in 1888 - 1st St. is the same as Front St.)

1902-3 Beatrice Electric Co. - no plant address given

1904 Beatrice Electric Co. - no plant address given

1907 Beatrice Electric Co. - " " " "

1911-12 Beatrice Electric Co. - " " " "

(The building I was thinking of was the Water Works right around the corner on Ella.) I'm sending an old map marked with an "X" in the appropriate corner. Hope this helps! Laureen

Jacobson Helgoth
CONSULTANTS

Utility Locate Form
Required for All Drilling
(Complete Entire Form)

Caller: Bruce Haley Date and Time Utilities Called: 3-20-01, 13;30

Project Manager: Bruce Haley Date Accepted/Approved: 3-20-01

Project Name: Beatrice FMGP, Pre-CERCLIS Screen

Street Address: From abandoned Railroad tracks West to Big Blue, South from Hwy 136 to Scott, 1st and Market

City: Beatrice State: NE

Date of Drilling: 3-22-01 Time of Drilling: 11:00

Time of Meet with Locators (*If Any*):

Description of Drilling Site (*Attach Site Map*):

REQUIRED:

_____ 1/4, Section _____, 4 T 4 N, R 6 (E)W

SPECIFIC LOCATION OF DRILLING SITE (i.e., which sides of existing building, building addition and footage(s), vacant lot, connecting intersection(s), which side of intersection, lot number, etc.)

Locate ID Number: 264132 **Depth of Borings:** <15'

Corner Lot: _____ Yes _____ No

Diggers Hotline/One Call Phone Number: 800-331-5666

Phone: Altell, Charter Communications, MCI	Fiber Optics:
Cable: TV (clear)	Sewer: Beatrice
Natural Gas: Peoples (clear) Don, 1-877-212-1900 pager	Electric: Beatrice
High Pressure Gas:	Water: Beatrice
Product Lines and USTs	Traffic:
	Owner:
Other:	Other:
Other:	Other:

EMPLOYEE MEETING UTILITY LOCATORS:

Company Name	Contact(s)	Comments/Conflicts	Clear	Paint Only	Meet

APPENDIX C

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

BEATRICE FORMER MANUFACTURED GAS PLANT
BEATRICE, NEBRASKA

DEFINITION OF TERMS

CERCLA is the Comprehensive Environmental Response Compensation and Liabilities Act, 42 USC ' 9601 et seq. (as amended).

A **FACILITY** is defined as any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works (POTW), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft or any site or area, where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

A **HAZARDOUS SUBSTANCE** means any substance, element, compound, mixture, solution, hazardous waste, toxic pollutant, hazardous air pollutant, or imminently hazardous chemical substance or mixture designated pursuant to the Clean Water Act (CWA), CERCLA, Safe Drinking Water Act (SDWA), Clean Air Act (CAA) or Toxic Substances Control Act (TSCA). The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas.

HIGH LEVELS may be determined by streamlined risk assessments, health consultations, state or federal soil screening criteria, and/or Superfund program policies or directives.

The **LIMITATIONS ON RESPONSE** provisions of the NCP [40 CFR 300.400(b)] states that removals shall not be undertaken in response to a release: of a naturally occurring substance in its unaltered or natural form; from products that are a part of the structure of, and result in exposure within, residential buildings or business or community structures; or into public or private drinking water supplies due to deterioration of the system through ordinary use.

NCP is the National Oil and Hazardous Substances Pollution Contingency Plan 40 CFR ' 300-302.

POLLUTANT or CONTAMINANT includes, but is not limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions or physical deformations, in such organisms or their offspring. The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas.). [40 CFR 300.5]

A **RELEASE** is defined as any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant), but excludes: workplace exposures; engine exhaust emissions; nuclear releases otherwise regulated; and the normal application of fertilizer. For purposes of the NCP, release also means threat of release. [40 CFR 300.5]

A **VESSEL** is defined as any description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel. [40 CFR 300.5]

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

I. SITE NAME AND LOCATION:

NAME: Beatrice Former Manufactured Gas Plant		
ADDRESS OR OTHER LOCATION IDENTIFIER:		
CITY: Beatrice **COUNTY**: Gage	**STATE**:Nebraska	**ZIP**:68310
TELEPHONE: Abandoned Site	**FAX**:	
DIRECTIONS TO SITE: From Lincoln travel south on Hwy 77 approximately 30 miles to Beatrice. The Site is located a 1st and Market Street. **MAP ATTACHED** X		

II. PROGRAM CONTACTS:

REQUESTED BY: Mike Felix	**DATE OF REQUEST**: 3-29-01	
AGENCY/OFFICE: Nebraska Department of Environmental Quality		
MAILING ADDRESS: P.O. Box 98922		
CITY: Lincoln	**STATE**: Nebraska	**ZIP**: 68509-8922
TELEPHONE: (402) 471-2186	**FAX**: (402) 471-2909	
EVALUATOR: Bruce Haley		
AGENCY/OFFICE: Jacobson Helgoth Consultants		
MAILING ADDRESS: 1033 "O" Street, Suite 546		
CITY: Lincoln	**STATE**:Nebraska	**ZIP**: 68508
TELEPHONE: (402) 434-6075	**FAX**: (402) 434-6076	

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

III. SITE INFORMATION:

TYPE OF FACILITY: Abandoned FMGP	**TYPE OF OWNERSHIP**: Gas utility
OWNER/OPERATOR INFORMATION:	
SITE STATUS (active/inactive): Inactive	**YEARS OF OPERATION**: Unknown

OPERATIONAL HISTORY (How was the site identified?): The site was identified from a list of know former manufactured gas plants.

IV. SUPERFUND SITE SCREENING CRITERIA

A. REMEDIAL CRITERIA

1. SOURCE AND WASTE CHARACTERISTICS

KNOWN OR SUSPECTED SOURCE TYPES AND LOCATIONS: contamination from the manufacture of coal gas.

SIZE OF SOURCE AND QUANTITIES (Volume, Area): Unknown

WASTE TYPES OR HAZARDOUS SUBSTANCES KNOWN OF SUSPECTED TO BE PRESENT: Unknown concentrations of PAHs and VOCs.

2. GROUND WATER PATHWAY:

What is the likelihood that a release to groundwater has occurred at the site? Release has occurred.

If a release is not suspected proceed to A.3.

a. USE AND CHARACTERISTICS:

GENERAL STRATIGRAPHY AND HYDROGEOLOGY: Shallow ground water (<20'), silty clay loam, located directly adjacent to the Big Blue River. Flow direction is south next to the Site. The ground water in the area is a remedial action class #3 which means that the ground water under the town is not used for consumption.

PRESENCE OF KARST TERRAIN: NO

DEPTH TO SHALLOWEST AQUIFER: Approximately 15 feet

PRIVATE WELLS WITHIN 4 MILES (locations and population served): 22, approximately 50 people served

MUNICIPAL WELLS WITHIN 4 MILES (locations and populations served): 10 wells, approximately 12,000 people served.

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

DISTANCE TO NEAREST DRINKING WATER WELL: The nearest water supply wells are owned by the City of Beatrice and are located in Section 2 of T4N, R5E. Approximately 5 miles northwest of town.

WELLHEAD PROTECTION AREAS: Yes, established in June 2000

3. SURFACE WATER PATHWAY:

What is the likelihood that a release to surface water has occurred at the site? Unknown

If a release is not suspected proceed to A.4.

a. USE AND CHARACTERISTICS:

FLOOD FREQUENCY: Unknown

DISTANCE TO NEAREST SURFACE WATER: 30 yards

SURFACE WATER BODIES WITHIN 15 DOWNSTREAM MILES: Big Blue River

DESIGNATED AND OR PROTECTED USES OF SURFACE WATER BODIES: unknown

DRINKING WATER INTAKES WITHIN 15 DOWNSTREAM MILES (locations and populations served):

FISHERIES WITHIN 15 MILES DOWNSTREAM MILES:

KNOWN OR POTENTIAL SENSITIVE ENVIRONMENTS AND WETLANDS WITHIN 15 DOWNSTREAM MILES:

4. SOIL EXPOSURE PATHWAY:

What is the likelihood of exposure to hazardous substances at the site? The ground water would be impacted because of contaminated soils.

a. CHARACTERISTICS

NUMBER OF PEOPLE LIVING WITHIN 200 FEET: 0

SCHOOLS OR DAY-CARES WITHIN 200 FEET: none (0)

POPULATION WITHIN 1 MILE: approximately 1,000

NUMBER OF WORKERS AT THE FACILITY OR ADJACENT FACILITIES WHOSE CONTAMINATION IS SUSPECTED: none (0)

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

LOCATIONS OF KNOWN OR POTENTIAL TERRESTRIAL SENSITIVE ENVIRONMENTS:

5. AIR PATHWAY:

What is the likelihood that a release of hazardous substances are migrating from the site to the air? None

If a release is not suspected proceed to B.

a. CHARACTERISTICS:

POPULATION WITHIN 1 MILE:

DISTANCE TO NEAREST INDIVIDUAL:

LOCATIONS OF KNOWN OR POTENTIAL SENSITIVE ENVIRONMENTS WITHIN 0 TO 1/4 MILE AND 1/4 TO 1/2 MILE:

B. REMOVAL CRITERIA

A. IS THERE A RELEASE OR THREAT OF RELEASE AS DEFINED BY THE NCP? YES_X_ or NO ___ UNKNOWN ____

EXPLAIN: Analytical results have verified that a release has occurred.

B. IS THE SOURCE A FACILITY OR VESSEL AS DEFINED BY THE NCP? YES_X_ or NO ___ UNKNOWN _____

EXPLAIN: The Site was a Manufactured Gas Plant as a public utility.

C. DOES THE RELEASE OR THREAT OF RELEASE INVOLVE A HAZARDOUS SUBSTANCE, OR POLLUTANT CONTAMINANT AS DEFINED BY THE NCP? YES_X_ or NO ___ UNKNOWN _____

EXPLAIN: The contaminants have been identified as PAHs.

D. IS THE RELEASE SUBJECT TO THE LIMITATIONS ON RESPONSE? YES___ or NO _X_ UNKNOWN _____

EXPLAIN:

E. DOES THE QUANTITY OR CONCENTRATION WARRANT RESPONSE? YES ___ or NO _X_

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

UNKNOWN ____

EXPLAIN:

F. HAS A PRP BEEN IDENTIFIED? (Include name, address and telephone number) YES __ or NO _X_

CURRENT OWNER: City of Beatrice
Name Address City State Zip Phone Number

CURRENT OPERATOR: _____

PAST OWNERS: UtiliCorp/Energy One aka Minnegasco

_____

_____

_____

I. IS THERE AN ACTUAL OR POTENTIAL EXPOSURE TO HAZARDOUS SUBSTANCES, OR POLLUTANTS, OR CONTAMINANTS? YES _X_ NO __

DEFINE THE MEDIA, PATHWAY AND RECEPTOR:

GROUND WATER YES _X_ NO __ UNKNOWN___ RECEPTOR: Big Blue River

EXPLAIN: Ground water has been impacted at the Site. Beatrice is considered a RAC 3 and therefore ground water is not used for consumption in the area. There is a potential for ground water to impact the surface water of the Big Blue River which is located directly adjacent to the Site.

SURFACE WATER YES _X_ NO __ UNKNOWN ___ RECEPTOR: Big Blue River

EXPLAIN: If contaminants leach from the Site the River may become impacted.

SOIL YES _X_ NO __ UNKNOWN___ RECEPTOR: _____

EXPLAIN: Soil contamination was verified by soil analysis conducted at a 1992 ESA Phase I.

AIR YES __ NO _X_ UNKNOWN ___ RECEPTOR: _____

EXPLAIN:

J. IS THERE ACTUAL OR A POTENTIAL FOR CONTAMINATION OF DRINKING WATER SUPPLIES? YES __ or NO _X_

POTENTIAL: YES __ or NO _X_

RELATIVE POTENTIAL: LOW _X_ MODERATE __ HIGH__

EXPLAIN: The City of Beatrice well field is located more than 5 miles Northwest of town.

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

K. ARE THERE HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS IN DRUMS, BARRELS, BULK STORAGE CONTAINERS, OR TANKS? YES__ or NO _X_ UNKNOWN ____

EXPLAIN:

L. ARE THERE HIGH LEVELS OF HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS IN NEAR-SURFACE SOILS (< 24 INCHES)? YES __ or NO _X_ UNKNOWN___

SURFACE SOIL CONTAMINATION (0-24 INCHES)? YES __ NO _X_ UNKNOWN__

SURFICIAL WASTES PRESENT? YES __ NO _X_ UNKNOWN __

SITE ACCESSIBILITY: SECURE __ ACCESS LIMITED __ READILY ACCESSIBLE _X_

WORKER POPULATION: _____

EXPLAIN: The Site is abandoned and the buildings have been removed.

M. ARE THERE CONDITIONS ON SITE WHICH MAY BE SUSCEPTIBLE TO IMPACT FROM ADVERSE WEATHER CONDITIONS? YES __ or NO_X_ UNKNOWN/UNCERTAIN__

EXPLAIN:

N. IS THERE A THREAT OF FIRE OR EXPLOSION? YES __ or NO _X_ UNKNOWN/UNCERTAIN __

EXPLAIN:

O. IS THERE A POTENTIAL FOR OTHER FEDERAL OR STATE RESPONSE MECHANISMS? IF SO, IDENTIFY THE APPROPRIATE PROGRAM: YES__ or NO_X_

RCRA __ NRC __ FIFRA __ UST ___ OTHER FEDERAL (_____)

STATE DEFERRAL_____

EXPLAIN:

P. ARE THERE ENDANGERED SPECIES HABITATS, WETLANDS, OR OTHER SENSITIVE ENVIRONMENTS NEARBY WHICH MAY BE ADVERSELY IMPACTED BY THE SITE? YES __ or NO _X_ UNKNOWN _____

EXPLAIN:

Q. ARE THERE OTHER SITUATIONS OR FACTORS WHICH WARRANT FURTHER CERCLA RESPONSE? YES __ or NO_X_ UNKNOWN ____

EXPLAIN:

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

V. SUPERFUND SITE SCREENING FINDINGS AND RECOMMENDATIONS:

A. CERCLA ELIGIBILITY:

_X_ FURTHER CERCLA RESPONSE RECOMMENDED

____ FURTHER CERCLA RESPONSE ACTION NOT REQUIRED - CERCLIS ENTRY NOT WARRANTED

(Cite one or more of the criteria from SECTION IV, as the basis for the above determination.)

Yes	No	Unknown	Issue	Yes	No	Unknown	Issue
X			Ground Water Pathway Threat		X		Direct Exposure Pathway Threat
X			Surface Water Pathway Threat		X		Air Pathway Threat
			Release or Threat of Release		X		Subject to Response Limitations
X			A Facility or Vessel			X	Willing/Capable PRP Response
X			Actual or Potential Exposure Threats		X		Drums, Barrels or Bulk Containers Present
	X		High Levels of Contamination in Surface Soils		X		Site Susceptible to Adverse Weather Conditions
	X		Threat of Fire of Explosion		X		Referred to Another Program

COMMENT: The Ground Water Pathway appears to be the only pathway where potential contaminants may migrate. The silts and sands in the area make migration the preferred path.

B. REMOVAL ACTION:

REMOVAL ASSESSMENT RECOMMENDED? YES _X_ NO____

____ EMERGENCY ____ TIME-CRITICAL __X__NON-TIME CRITICAL

(Cite one or more of the criteria from SECTION IV – Removal , as the basis for recommending that a removal action be conducted.)

Yes	No	Unknown	Issue	Yes	No	Unknown	Issue
X			Exposure to Hazardous Substances or Pollutants or Contaminants		X		Adverse Weather Impacts
	X		Contaminated Drinking		X		

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

			Water				Fire/Explosion Threat
	X		Contaminated Soil		X		Drums, Barrels or Containers
			Other Response Mechanism				Other Factors

COMMENT:

(Complete Recommended Removal Action Attachment and the Site Prioritization Information Attachment for sites recommended for a Removal Action.)

C. ADDITIONAL INTEGRATED ASSESSMENT RECOMMENDED:

__X__ ADDITIONAL INTEGRATED ASSESSMENT RECOMMENDED

____ ADDITIONAL INTEGRATED ASSESSMENT NOT RECOMMENDED

(Cite one or more of the criteria from SECTION VI, as the basis that additional site evaluation be performed.)

Yes	No	Unknown	Issue	Yes	No	Unknown	Issue
X			Ground Water Pathway Threat				Direct Exposure Pathway Threat
			Surface Water Pathway Threat				Air Pathway Threat
			Release of hazardous Substances or Pollutants or Contaminants				The Source is a Facility as Defined by the NCP
			CERCLA ALimitations of Response@ Provisions Do Not Apply				Contaminants Present in Sufficient Quantity and/or Concentration
			Willing/Capable PRPS Willing to Respond at this Time				Actual or Potential Exposure Threat
			Drums, Barrels or Bulk Containers Present				High Levels of Contamination in Surface Soils
			The Site is Susceptible to Adverse Weather Conditions				Threat of Fire of Explosion
			Other Federal, State, or Other Response Mechanisms Available to Investigate the				Endangered Species, Wetlands, or Other Sensitive Environments which may be impacted by the Site

REGION VII SUPERFUND SITE PRE-CERCLIS SCREENING FORM

			Site				

OTHER (DESCRIBE):

VI. ADDITIONAL INFORMATION OF COMMENTS:

(NOTE: Complete Site Prioritization Information Summary Attachment for sites recommended for further Integrated Assessment work.)

VII. EVALUATOR

SIGNATURE: Bruce Haly DATE: 5-7-01

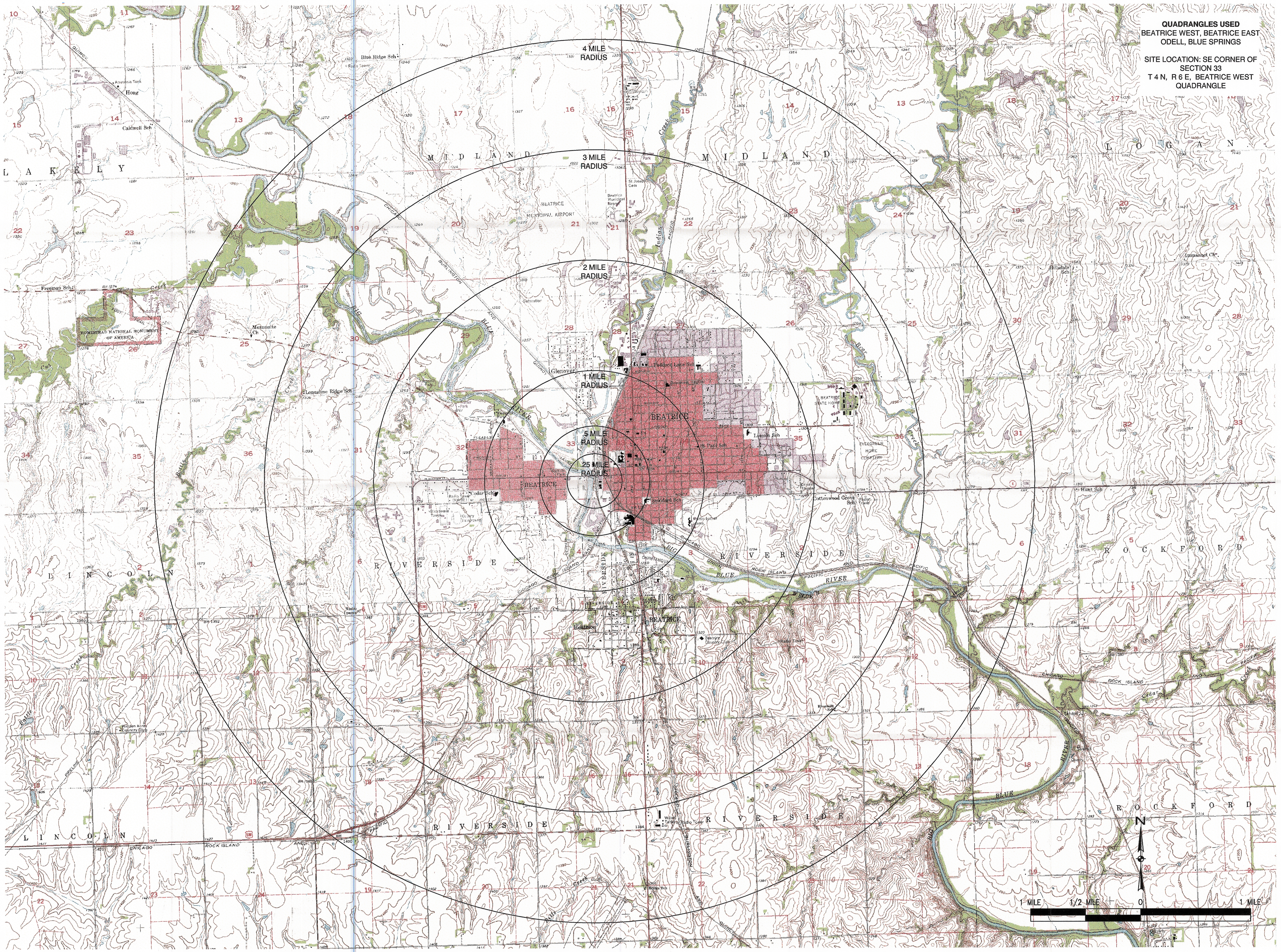
POSITION/TITLE: Geologist / Jacobson Helgoth Consultants, Inc

OFFICE/AGENCY: _____

REVIEWED BY: _____ DATE: _____

APPENDIX D

BEATRICE TOPOGRAPHIC MAP



NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

Jacobson Helgoth CONSULTANTS

ISSUE DATES

REV.	DESCRIPTION	BY	DATE
0	ORIGINAL DRAWINGS	SLK	04/05/01

JHC PROJECT NO.: 362-26

PROJECT MANAGER:

DESIGNED:

DRAWN: SLK SLK

CHECKED:

BEATRICE TOPOGRAPHIC MAP

DRAWING NUMBER C-1

FILE NO.: 36226C1(A)